

# The Mining Journal.

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1460.—Vol. XXXIII.

LONDON, SATURDAY, AUGUST 15, 1863.

(WITH SUPPLEMENT) STAMPED.....SIXPENCE.  
UNSTAMPED.....FIVEPENCE.

**MR. JAMES CROFTS, SHAREBROKER,**  
No. 1, FINCH LANE, CORNHILL.  
Mr. Crofts transacts business, in the way of PURCHASE or SALE, in every description of stocks, but particularly in BRITISH MINES, in no case departing from the position of a broker, at net prices. All orders meet with the utmost punctuality and dispatch, and advice given as to the nature and eligibility of INVESTMENTS, when required. EXCHANGES OF STOCK effected on the most advantageous basis, subject only to one commission.

**FOR SALE:**—Preference North Miners (5s. paid), at 3s. to 3s. 6d. premium; West Trevelyan, 11s. 6d.; Gonamen, £234 (will be much higher); 60 Illogan, 28s.; Grenville, and East Grenville (should be bought); 20 Bottle Hill, 14s. 6d.; 20 Unity, 13s.; 20 Wheal Hope, 25s. Crebor, 30s. 6d. to 37s. (cash paid); 40 Penmit Lead.

**BUYER OF QUEBRADA.**  
Mr. Crofts' CIRCULAR, No. 19, contains:—Review of Market, and Special Notices on Good Mines. Second article, "Latest of the Market." Prosper United—Analysis of Report of 29th July. Welsh Mines, Amalgamated West Miners and Twelve Apostles, North Miners Preference Shares, Gonamen and West Trevelyan, Quebrada Report (important). Single copy, six stamps.

**MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.**

**JAMES LANE has FOR SALE, at net prices:**—30 Boscawen, £2; 5 Basset and Grylls, £24; 25 Crebor, £134; 3 Ding Dong, £2; 20 East Carn Brea, £2; 20 East Rosewarne, £2; 10 East Caradon, £234; 20 East Lovell, £234; 50 East Bronydd, 25s.; 25 Gawton, 14s.; 10 Great Fortune, £23; 20 Gurney, 31s. 6d.; 50 Great Wheal Busy, £44; 50 Hawkmoor, 5s.; 20 Ludcott, £2; 10 Margery, 20s.; 20 North Trevelyan, £234; 100 Silver Mountain (fully paid), £1 1s.; 100 Sortridge Consols, 9s. 9d.; 100 Tamar Consols, £46; 20 Wheal Harriet, 30s.; 20 Just Consols, 16s.; 20 St. Just United, £234; 10 Sithney and Carmuel, £144; 5 Tremayne, £224; 30 Tolvadden, 30s.; 10 Vigna and Clogau, £32. **JAMES LANE is a BUYER of Harriet at £2; Wheal Tremayne, West Jane, West Frances.**

**STOCK AND SHAREDEALER.—MR. PETER WATSON,**  
ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES, 79, OLD BROAD-STREET, LONDON, E.C.

TELEGRAPHIC MESSAGES TO BUY OR SELL Railway, Bank, Mine, and other Shares and Stocks, punctually attended to on commission, or at net prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

(Two in Cornwall and Sixteen in London.)  
Bankers: Union Bank of London.

Every information can be obtained on personal application or by letter, as to purchases and sales of mine and other shares, and the best investment for capital. From the close proximity of his Offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.—August 14, 1863.

**MR. LELEAN, 11, ROYAL EXCHANGE, LONDON, E.C., has**

**FOR SALE the FOLLOWING MINING SHARES, free of commission:**—

3 Bryn Gwlog, £234.	30 Ludcott, £2 18s. 6d.	25 Sortridge, £234.
5 Basset, £234.	10 Lady Bertha, 11s. 6d.	2 So. Wh. Frances, £74.
5 Bedford United, £234.	10 Marke Valley, £2 18s. 6d.	100 South Caradon Hooper, £234.
25 Camborne Vean, 32s. 3d.	5 Mary Ann, £124.	5 Tincroft, £214.
1 Conduvor, £234.	100 North Miners, 4s. 6d.	5 Trelyon, £234.
5 Cook's Kitchen, £234.	2 New Seton, £234.	50 Tamar Consols, 8s.
5 Clifford Amal., £234.	5 North Basset, £234.	20 Tolvadden, £1 16s. 3d.
20 Cuddra, 34s.	5 North Buller, £74.	25 United Mexican, £234.
50 Cardigan Consols, £234.	5 North Trevelyan, £234.	60 Vale of Towy, 4s. 9d.
10 Drake Wells, 32s. 6d.	5 North Downs, £2.	5 Vigna and Clogau, £32.
40 East Russell, £2 7s. 6d.	5 Nanglies, £21.	50 Wheal Unity, 12s. 3d.
10 East Carn Brea, £7 17s. 6d.	5 North Phoenix, £234.	90 Worthing, 11s.
5 East Chiverton, £234.	5 North Roskear, £234.	1 West Seton, £234.
10 East Trevelyan, £234.	10 N. Trevelyan, £2 7s. 6d.	2 West Caradon, £234.
5 East Providence, £234.	40 North Croft, £234.	10 West Conduvor, £234.
15 East Grenville, £234.	90 Nanteco and Penrhaw, £234.	1 Wheal Seton, £234.
15 East Caradon, £234.	5 Par Consols, £234.	50 Wheal Grenville, £234.
5 East Basset, £234.	20 Penrhaw-dra, 30s. 9d.	20 Wheal Hestie, £174.
80 East Jane, £234.	5 Pendine Cons., £2 18s. 6d.	100 West Trevelyan, £234.
10 East Rosewarne, £2 15s.	2 Providence, £214.	1 Wheal Buller, £234.
5 Grambler, £234.	10 Rosewarne Consols, £234.	60 Wheal Harriet, 29s.
5 Great Fortune, £234.	18 Rosewarne United, £234.	60 Wheal Crebor, 34s. 6d.
100 Great Retailack, £234.	2 South Tolgus, £234.	60 Wh. Edward, £2 13s. 9d.
10 Gt. S. Tolgus, £234.	5 Spenser Moor, £184.	5 West Chiverton, £234.
10 Garreg, 3s. 3d.	1 St. Ives Consols, £234.	2 Wheal Margaret, £234.
40 Kelly Bray, 17s. 9d.	2 St. John del Rey, £234.	1 Wheal Folemar, £134.
10 Kitty (St. Agnes), £234.	1 Stray Park, £234.	

Mr. LELEAN recommends the immediate purchase of North Miners, West Trevelyan, and Great Laxey shares.—August 14, 1863.

**GEORGE RICE, SHAREBROKER, 1, FINCH LANE, CORNHILL, LONDON (30 years' experience).**

SPECIAL BUSINESS in East Caradon, East Russell, East Carn Brea, Crebor, Tincroft, East Rosewarne, and other mines. Parties interested in these mines would do well to consult G. Rice before buying or selling. Business done for the fortnightly account. Money advanced on mining shares. Bankers: Bank of London.

**EAST CARADON.—Geo. Rice is thoroughly acquainted with the state and prospects of this mine, and also the market operations, and should be consulted by holders and others.—August 14, 1863.**

**WILLIAM SEWARD, MINING BROKER, STOCK AND SHAREDEALER, 31, THROGMORTON STREET, LONDON, E.C.**  
Commission, 1¼ per cent. on all transactions.

**MR. H. WADDINGTON, MINING AND SHAREBROKER, 20, THROGMORTON STREET, LONDON, E.C.**

**RICHARD CLIFT, MINE SHAREDEALER,**  
late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all letters are to be addressed.

**WILLIAM ALLISON, STOCK, SHARE, AND MINING BROKER, 29, AUSTINFRIARS, LONDON, E.C.**  
Orders to buy or sell, accompanied by references, punctually attended to.

**JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET, LONDON, E.C., has BUSINESS to TRANSACT in Harriet, East Grenville, East Caradon, Grenville, Wheal Crebor, East Rosewarne, East Lovell, North Miners (Preference), &c.**

Mr. Hume can recommend two mines of great promise, and at present at a more nominal figure, but which, from their merits and improving prospects, must soon command a very high price in the market. Particulars will be supplied on application. **JAMES HUME'S "Circular" for August now ready, price 6d.; annual subscription 5s.** Commission, 1¼ per cent.

Bankers: London and Joint-stock Bank.

**MESSRS. R. HORLEY AND CO., SWORN STOCK, SHARE, AND MINING BROKERS, 45, CORNHILL, E.C. (late of 3, Royal Exchange-buildings), TRANSACT EVERY DESCRIPTION OF MINING BUSINESS, on commission only, and are in a position to obtain reliable information respecting all dividend and progressive mines.**

**MESSRS. C. HODGE AND CO., MINING ENGINEERS,**  
1, CROWN COURT, OLD BROAD STREET, LONDON, E.C.

Should be consulted by investors prior to BUYING or SELLING MINING STOCK, or OTHER SECURITIES, on the usual commission. MINES INSPECTED and REPORTED on liberal terms. Their monthly "Monitor," or guide to legitimate mining stock, may be had on application, by enclosing six postage stamps. Telegraphic messages receive prompt attention.

**MR. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 16 years), has FOR SALE, at net prices:**—100 Illogan, 27s. 6d.; 100 West Trevelyan, 9s.; 70 North Robert, 14s. 6d.; 10 West Chiverton, 6s. 6d.; 35s. 9d.; 45 Wheal Grenville, £264; 3 Wheal Margaret, £224; 20 Nant-y-lago, 30s.; 35 Ludcott, £234; 25 North Buller, £74; 30 North Croft, £234; 20 Long Rake, £44; 40 Gonamen, £234; 50 Great Caradon, 50s.; 20 Drake Wells, £134; 30 East Caradon, 50s.; 20 Cefn Cileon, 32s. 9d.; 200 Santa Barbara, 11s.; 100 Worthing, 10s.; 75 Pollard, 6s. 9d.; 100 East Seton, 8s.; 120 Caradon, 22s.; 130 Dale, 10s. 6d.; 200 Hawkmoor, 4s. 3d.; 200 Garreg, 5s.; 15 Sithney and Carmuel, £44; 150 Gawton, 10s. 6d.; 100 South Conduvor, 200 Great Northern Copper, 4s.; 2 Wheal Seton, 60 East Grenville, £234; 125 Trumpet United, 6s.; 110 Great Retailack, 50 Central Miners, 28s.; 2 South Frances, 100 West Maria and Fortescue, 37s. 6d.; 50 East Rosewarne, 22s. 6d.; 100 Okei Tor, £234; 100 Bottle Hill, 16s. 6d.; 100 New South Caradon, 9s. 6d.; 50 Merilyn, 9s. 6d.; 150 Mollard, 8s. 9d.; and 70 Tamar Consols, 12s.

**G E O R G E M O O R E,**  
1, CROWN COURT, THREADNEEDLE STREET.

In any business that GEORGE MOORE is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

**JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:**—

20 Aberffwd, £234.	20 Garreg, £234.	50 St. Just Ua., £2 18s. 6d.
1 Basset, £234.	1 Grambler, £234.	20 South Carn Brea, £234.
5 Bryn Gwlog, £234.	15 Gt. S. Tolgus, £234.	1 South Frances, £75.
5 Billins, £15.	30 Gt. Wheal Busy, £234.	30 St. Day United, 19s.
20 Bottle Hill, 14s. 3d.	50 Hawkmoor, 4s. 6d.	20 St. Just Consols, 14s. 9d.
50 Boscawen (offer wanted), £234.	1 Herodasfoot, £234.	4 Stray Park, £234.
10 Bedford United, £234.	25 Hingston Down, £234.	30 South Caradon Hooper, 13s. 6d.
5 Bas. & Grylls, £22 18s. 9d.	50 Holmshush (old shares), 20s.	1 South Caradon, £416 1/4.
20 Cuddra, 32s. 6d.	50 Harwood, £234.	1 South Basset, £234.
5 Cobre, £234.	20 Illogan, 28s.	10 South Gornard, £234.
20 Caradon Hill, £234.	10 Ludcott, £234.	10 Sithney & Carn., £234.
10 Calvadack, £234.	5 Linars, £234.	10 Sortridge, 6s. 9d.
2 Clifford Amal., £234.	20 Lady Bertha, 11s.	5 Trelyon, £234.
5 Cook's Kitchen, £234.	30 Mollard, 2s. 6d.	20 Tolvadden, 31s. 6d.
20 Charlotte United, 8s. 6d.	40 Monte Aurore, £234.	5 Tremayne, £234.
4 Carn Brea, £234.	5 Marke Valley, £2 18s. 9d.	20 Trumpet United, £234.
20 Cefn Cileon, £234.	15 North Basset, £2 6s. 3d.	10 Tamar, 9s.
50 Calstock Consols, £234.	10 North Croft, £2 10s. 6d.	1 Trevelyan, £164.
15 Caradon Consols, £234.	30 Nant-y-lago, £234.	5 Tincroft, £214.
100 Carawass, £234.	1 New Seton, £105.	100 Vallanazaca, £234.
5 Dale, 10s.	10 North Miners, 4s.	100 Vale of Towy, £234.
50 Don Pedro No. del Rey, 21s.	1 Wheal Seton, £234.	5 Vigna and Clogau, £32.
50 Drake Wells, 31s. 9d.	30 New Wh. Martha (fully paid), £234.	1 Wheal Margaret, £234.
5 Ding Dong, £2.	10 Nanglies, £234.	5 W. Caradon, £214.
1 Devon Great Consols, £234.	5 North Buller, £74.	50 Wh. Pollard, £234.
10 E. Carn Brea, £7 18s. 9d.	30 North Frances, 19s.	1 West Tolgus, £234.
5 East Basset, £234.	2 No. Roskear, £234.	1 Wheal Buller, £234.
20 East Marguist, £234.	50 New Prospect, £234.	30 Wheal Ellen (S.A.), £234.
10 East Russell, £2 6s. 9d.	50 New So. Caradon, 9s. 9d.	1 Wheal Crebor, 35s.
20 E. Gunn Lake, 29s. 9d.	50 Santa Barbara, 12s. 3d.	10 Wheal Uay, £2 13s. 9d.
5 East Grenville, £234.	10 South Carn Brea, £234.	10 West Chiverton, £234.
5 East Caradon, £22 13s. 6d.	30 North Rosewarne, £234.	10 Wh. Kitty (St. Agnes), £234.
30 East Great Work, £234.	50 North Pool, £234.	50 W. Stray Park, 68s. 9d.
5 E. Bas. & Grylls, 18s. 6d.	20 North Downs, £2 1s.	30 Wheal Unity, 11s. 9d.
20 E. Rosewarne, £2 12s. 6d.	50 Port Phillip, 31s. 3d.	15 Wheal Union, £234.
20 East Clogau (fully paid), 6s. 6d.	10 Pendine, £2 6s. 9d.	20 Wheal Edward, £234.
100 East Martha (fully pd.), 12s. 9d.	5 Polbreen, £144.	20 Wh. Harriet, 38s. 9d.
20 Ffynnon, £234.	50 Quebrada, £234.	1 Wendron Cons., £234.
20 Glasgow Caradon Consols, £234.	10 Rosewall Hill, £234.	1 Wheal Reeth, £234.
1 Great Fortune, £229s.	5 Roskearwith, £234.	1 Wheal Polmar, £234.
20 Gurney, £234.	20 Redmoor, 3s.	40 West Trevelyan, 9s. 9d.
20 Great Devon & Bedford, £234.	10 Rose Consols, 29s.	10 Yudanamatana, £234.
20 Great Caradon, £234.	10 Rosewarne United, 29s.	

And is a BUYER of 10 Wheal Clifford, 2 Wheal Buller, 30 Nanglies, 30 Vale of Towy, 100 Quebrada, 1 Devon Great Cons., 2 Carn Brea, 1 East Darren, 5 Wheal Seton. Mr. HERRON directs the attention of his friends to the improved prospects of the following mines:—Wheal Clifford, Bryn Gwlog, Wheal Seton, Trevelyan, Worthing, Nanglies, St. John del Rey, and Carn Brea, as good investments at present prices.

A. Adam's-court, Old Broad-street, August 14, 1863.

**MESSRS. VIVIAN AND REYNOLDS, 68, OLD BROAD STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS OF MINES, COMMISSION, AND GENERAL AGENTS for the PURCHASE or SALE of MINING SHARES, RAILWAY, and EVERY OTHER DESCRIPTION OF STOCK.**

Commission on share transactions 1¼ per cent. on £100 and above, and 2¼ per cent. on less sums.

**MR. EDWARD COOKE, SHAREBROKER, 75, OLD BROAD STREET, LONDON, E.C.** Advice given on application on the merits of the various mines currently dealt in.

**MR. GEORGE BATTERS** strongly recommends his friends to buy Tincroft, West Chiverton, Chiverton, Herodasfoot, South Caradon, and Devon Great Consols for investment. These shares will pay good interest for money at present quotations.—5, Cowper's-court, Birch-lane, E.C.

**QUEBRADA LAND AND MINING COMPANY.—WANTED TO PURCHASE, for immediate cash, ONE HUNDRED AND FIFTY SHARES, at a discount.** GEORGE BATTERS, 5, Cowper's-court, Birch-lane, London, E.C.

**MR. E. GOMPERS, MINING OFFICES, 3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.** BUSINESS TRANSACTED in BRITISH and FOREIGN STOCKS and SHARES. Terms, 1¼ per cent.—Bankers: London and Westminster Bank.

**JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C.,** SHARES in MINES BOUGHT and SOLD on commission, at 1¼ per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

**MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C., has FOR SALE:**

Basset and Grylls, £234.	East Carn Brea, £274.	North Downs, £2 2s. 6d.
Carn Brea, £234.	East Caradon, £234.	Rosewall Hill, £234.
Clifford Amalgam., £234.	Great North Downs, £2.	Sithney Carnuel, £234.
East Wh. Edward, £234.	Great Fortune, £234.	Wheal Crebor, 35s.
for end of Sept.	Great Laxey, £234.	Wheal Union, £234.
East Russell, £234.	North Basset, £234.	Wendron Consols, £234.
And is a BUYER of—		
Hingston, £234.	Wheal Edward, £234.	Cook's Kitchen, £234.
South Tolgus, £234.	Nanglies, £18.	Wheal Union, £234.

T. ROSEWARNE is a SELLER of 50 East Caradon at market price, and 50 for the end of every month during the year 1863 at 10s. per share less; he will also sell the dividends on 100 shares for 10s. per share quarterly for the next two years, and if any calls are made during the two years such calls are to be paid to him in addition to the 10s. Any party entertaining this, contracts must be tendered on each side.

Aug. 14, 1863. Bankers: Bank of London.

**MR. THOS. THOMPSON, MINING OFFICES, 12, OLD JEWRY CHAMBERS, LONDON, E.C.**

Mr. THOMPSON has the means of obtaining the very first information, and is fully capable of giving the best advice, either for investment or speculation.

**JOSEPH GREGORY, STOCK AND SHAREBROKER, 2, HATTON COURT, THREADNEEDLE STREET, LONDON, E.C.** Commission on purchase and sale of mining shares, 1¼ per cent. Bankers: City Bank.

**MR. G. D. SANDY, SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C.**

**FOR SALE:**—20 Camborne Vean, 31s. 20 North Downs, 42s. 6d. 50 East Rosewarne, 10s. 6d. 20 East Bottle Hill, 5s. 9d. 70 Vale of Towy, 4s. 3d. 10 Cornbrance, 10s. 6d. 10 East Carn Brea, £234. 50 Wheal Crebor, 34s. 9d. 30 East Lovell, 12s. 30 Wheal Unity, 11s. 9d. 55 Wheal Pollard, 7s. 6d. 20 Lady Bertha, 14s. 10 Gt. S. Tolgus, £234. 40 East Seton, 7s. 6d. 20 New So. Caradon, 11s. 1 West Tolgus, £234. 10 Tolvadden, 31s. 6d. 30 North Dolcoath, £2. 30 Carn Camborne, 17s. 5 No. Trevelyan, 71s. 3d.

Daily price list forwarded on application.

**MESSRS. WARD AND JACKMAN, STOCK AND MINING BROKERS, 2, ADAM'S COURT, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C. (ESTABLISHED TEN YEARS.)** TRANSACT BUSINESS in BRITISH and FOREIGN MINING SHARES and OTHER SECURITIES at lowest prices, net or on commission, but not being DEALERS only execute orders confided to them.

Telegraphic messages to buy or sell shares of every description promptly executed for immediate cash, or the fortnightly settlements.

Commission, 1¼ per cent. on all transactions.

Aug. 14, 1863. Bankers: London and Westminster, Lothbury.

**MR. J. P. ENDEAN, MINING AND GENERAL SHAREBROKER, 1, CROWN COURT, OLD BROAD STREET, LONDON, E.C.**

Investors will find, through him, an advantageous opportunity for BUYING or SELLING MINING SHARES, or OTHER SECURITIES, the usual commission charged. MINES and MINERAL PROPERTIES, INSPECTED and truthfully REPORTED; terms moderate. Telegraphic messages receive immediate attention.

A selected list of sound progressive and dividend shares will be forwarded on receipt of a fee of 5s., in stamps or post-office order.

**MR. T. P. THOMAS, MINING AGENT AND AUCTIONEER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.**

**MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, 3, PINNER'S COURT, OLD BROAD STREET, LONDON; and 16, HACKINS HAY, LIVERPOOL.**

Mr. THOMAS has instructions to DISPOSE of 300 shares in a valuable mining company in North Wales, limited to £1 per share, and paid up to 15s. 6d. These shares are likely to become of great value. A very favourable opportunity now occurs to make a judicious investment in these shares. Particulars on application.

Also FOR SALE, 200 shares in the North Great Work Lead Mining Company (Limited), £2 paid. These shares can be had on very advantageous terms if taken in one lot.

**MR. FRANCIS G. LANE, No. 2, ROYAL EXCHANGE, LONDON, E.C.**

The following SHARES FOR SALE, at net prices:—

25 Marke Valley, £234.	20 St. Just United, £234.	200 East Clogau (fully paid) 5s.
50 Silver Mountain, 30s. 6d.	100 Illogan, 28s.	50 East Clogau, £234.
50 Glasgow Caradon, £234.	5 Bryn Gwlog, £234.	50 New Wh. Martha, £234.
25 East Rosewarne, 54s.	50 Gt. Devon and Bedford (Colcharton), £2 15s.	20 North Croft, £234.
10 Wheal Hope, 34s.		

BUYER of 100 Quebrada, 100 North Miners (preference), and 50 Great Devon and Bedford (Colcharton); cash will be paid on receipt of transfer and certificate.

Bankers: London and County Bank.

**MR. FREDERICK WM. MANSELL, STOCK AND MINING SHAREBROKER, 75, OLD BROAD STREET, LONDON.**

Mr. MANSELL will, on application, forward a list of mines for immediate purchase, likely to considerably advance in price during the next month.

TELEGRAPHIC MESSAGES TO BUY OR SELL RAILWAY, BANK, MINE, and other Shares and Stocks, punctually attended to on commission, or at net prices for cash, or for fortnightly settlements, with advice as to purchases or sales.

(Two in Cornwall and Sixteen in London.) Bankers: Union Bank of London.

Every information can be obtained on personal application or by letter, as to purchases and sales of mine and other shares, and the best investment for capital. From the close proximity of his Offices to the Stock Exchange, as well as the Mining Exchange, PETER WATSON is enabled to act with promptitude on all orders entrusted to him, which at all times are carried out with punctuality, and to the best advantage of his clients.—August 14, 1863.

**MR. E. BEAZLEY, MINING AND GENERAL BROKER, 1, BANK CHAMBERS, LOVBURY, LONDON, E.C.**

**WILLIAM BARTLETT, STOCK AND SHAREBROKER, 12, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C., has FOR SALE:**

50 Caradon Vale, £234.	50 Myndy Iron, 32s. 6d.	40 Tolvadden, £144.
2 Clifford Amal., £234.	10 Nanglies, £234.	10 Trumpet Cons., £114.
5 Cook's Kitchen, £234.	1 New Seton, £105.	40 United Mexican, £234.
1 Devon Gt. Cons., £234.	60 New Wheal Martha, £234.	50 Vale of Towy, 4s. 3d.
5 East Basset, £234.	25 North Croft, £2 13s. 9d.	2 West Caradon, £234.
100 East Bottle Hill, 6s.	25 North Croft, £2 13s. 9d.	5 West Chiverton, £234.
10 East Caradon, £234.	20 North Downs, £2 1s.	1 Wheal Buller, £234.
30 East Carn Brea, £274.	100 North Miners, 4s.	50 Wheal Crebor, 35s.
50 East Chiverton, £234.	2 North Roskear, £234.	20 Wheal Grenville, £234.
30 East Grenville, 63s. 3d.	20 Pendine, £2 6s. 9d.	20 Wheal Harriet, 29s.
40 Garlinda, £234.	1 Providence, £214.	100 Wheal Ida, 5s. 6d.
3 Gram. & St. Aub., £234.	5 South Basset, £234.	3 Wheal Ludcott, £234.
50 Great Caradon, £234.	1 South Caradon, £416 1/4.	3 Wheal Margaret, £234.
5 Gt. Wh. Fortune, £234.	50 So. Car. Hooper, 14s.	4 Wh. Mary Ann, £124.
20 Gt. S. Tolgus, £234.	1 South Frances, £75.	2 Wheal Seton, £234.
2 Herodasfoot, £234.	50 St. Tolgus, £234.	5 Wh. Trevelyan, £164.
5 Illogan Consols, £144.	10 St. John del Rey	



## Original Correspondence.

## TUNNEL THROUGH MOUNT CENIS.

SIR.—There appeared in your valuable Journal of last week a very interesting description of the machinery used, and with great success, in boring through the above tunnel, by Mr. Charles Fox, a member of the Cornwall and Devon Mining Association, to whom the readers of your Journal are indebted for the pains he has taken to bring the subject before the notice of the mining engineers. I should think that if Mr. Fox were to continue the subject, and give a drawing of the machine in detail, and show the comparative cost of drifting by this mode and the usual way by manual labour and common borers, that he would confer a great boon on all parties connected with mining. I concur with Mr. Fox's remarks, that a great deal could be accomplished towards applying mechanical means to bore through hard rocks. I have, during the last 10 years, thought a great deal on this subject, and have also paid attention to the several suggestions laid out by scientific men. The objection I find in the application of machinery to this description of work being its complication, the liability to breakage, the space occupied at the face of the drifts, and also the heavy outlay in conveying steam or air from the surface to the mines, especially when the drifting should happen to be in some distance from the bottom of the pit.

In new workings, starting from the bottom of the pit, and where a great length of which is requisite to be made before reaching the workable seams, during that period the winding-engines, generally speaking, are not wholly employed, consequently there is ample supply of steam-power at command, which could be applied to many useful purposes. I have found it so during my experience in mining the last 20 years; and, in my opinion, under such circumstances, the application of machinery for boring could be used, and with profitable results; and also, I am sure, that if some economical plan could be devised to accomplish such operations, a great deal of time could be saved, which is a very important element connected with mining. I trust that our scientific men will persevere towards approaching this point; and they should be encouraged in every respect by proprietors of mines, who, in the end, get the greatest benefit. WELSH MINER.

## APPLICATION OF MACHINERY TO MINING.

SIR.—Because it is an axiom that the well-being of one interest tends to the general benefit of all, the fact itself is generally lost sight of altogether, in considering what may tend to promote that interest; the causes usually being the justifiable doubts of some and the mistaken prejudices of others; and it is to such men as Mr. Charles Fox, who devote all the resources of their mind, and bestow all their time and attention to the welfare of their fellow-creatures, that a deep debt of gratitude is generally due by the public, more particularly in this instance, for drawing the attention of the mining interest to a subject which must, sooner or later, from the force of circumstances alone, prove one of deep, if not of vital, import to the mining community, and consequently to the public—perhaps to none sooner than the proprietors of our native copper mines. I allude to Mr. Fox's interesting letter, in last week's *Mining Journal*, on the subject of the "Excavating Machinery in Mount Cenis Tunnel," and to the substitution of machinery in the principal underground operations, and take this means of thanking him for giving me the opportunity of again bringing under the notice of the public what I trust may be considered the adaptability of my machinery for all driving or sinking purposes.

It is scarcely fair to bring into comparison machinery made with the unlimited resources of two Governments for a purpose in which outlay for plant, cost of construction, and working were the least considerations, with machinery purposely constructed for its adaptability as to size and simplicity to meet the necessity of the requirement, that it must be worked by men totally ignorant of mechanism; and, lastly, that the cost attendant on its adoption, and time saved thereby (which latter forms a considerable ingredient of cost) must be less than that incurred by the present mode.

I, therefore, trust I may be permitted to show that, if the Italian machine may not be altogether desirable for our general purposes, in consequence of its length, and expense of working it, that there is machinery attainable that I am confident will meet the general requirements, and for this purpose I think I can hardly do better than give, so far as is in my power, from the data given by Mr. Fox, a comparison of the points which he, as a gentleman thoroughly conversant with such matters, considers to be of the most importance, between the Mount Cenis machine and my own.

The Italian machine delivers 200 blows per minute; mine, in consequence of the difference of its construction, 500 blows per minute.

The former requires a pressure of five atmospheres to enable it to deliver the number of blows stated; mine, for the reason already given, requires a pressure of two atmospheres only.

The Italian machine delivers altogether, at a speed of 200 blows per minute, 29 cubic feet of air. I never measured what mine delivered, but calculating its capacity, supposing it were filled at every stroke, requires 17 cubic feet per minute, working at the rate of 500 blows per minute. This makes no allowance for cut-off, which, working at the rate it does, may reasonably be calculated at 25 per cent. off the amount given.

I have purposely given a liberal working pressure on the piston; but with only two-thirds of the pressure stated, I have bored holes through rock costing full 20% per fathom, to drive at the rate of 20 inches in 19 minutes; and through rock costing 5% per fathom, to drive at the rate of 1 foot in 4 minutes.

From the low pressure required to work the machine, reservoirs for the air are dispensed with, and consequently the heavy expense attending them.

The air-pump may be placed at surface, and attached to any motive-power there may be available on the mine, or it may be attached underground to the main rod of the pumping-engine, in the shape of a plunger, only of lighter construction, and with less expense in fixing. The cost of branch pipes to convey the air would be from 2s. 6d. to 5s. per fathom.

The whole cost of the air-machinery would be fully covered by the saving effected (say) in the cost of making a single mine only for the purpose of ventilation; for, with the adoption of this machinery ample ventilation would be secured, and ventilating winzes dispensed with altogether.

In conclusion, I have only to add that I shall be most happy in acceding to Mr. Fox's wish, to supply a machine for trial in any mine within the sphere of the Cornwall and Devon Mining Association; and, as an earnest of my confidence, provided the mine will find the air, I am quite ready to undertake a contract in any mine within the limits of the association, to drive from 250 to 2500 fms.; to begin, say, at double the average speed the ground can be driven by manual labour, for 10% per cent. less cost than that now given to the men for driving; under any penalty per diem up to 10%, that the monthly average may not have been reached, provided the mine agrees to pay me a similar premium per diem on all the ground I lay open above that monthly average. As a large number of visitors might be expected to visit the mine where the machine is at work, I should prefer the machine working in an adit, where it would be most accessible.—*Tavistock, Devon.* EDWARD S. CREASE.

## MACHINE VENTILATION, AND THE FURNACE.

SIR.—I anxiously waited for your last Journal, in the hope that Messrs. Ridley and Jones would have furnished the various measurements asked for in your article describing their invention, and was much surprised to find that they have not even referred to the matter; more especially as you, unfortunately, published in the same Journal an article from a correspondent headed "The Dangers of Mechanical Ventilation." In your article you state that Messrs. Ridley and Jones's apparatus will pump air at the rate of 100,000 cubic feet per minute, with only a 15-horse engine to work it. This at first sight, doubtless, appears to indicate that the machine is a perfect marvel, but practical men are not inclined to accept such statements as conclusive, because they well know that they prove nothing whatever unless every detail connected with the circumstances of the working are well known. The practical man must know not only what it is estimated that a machine will do, but also how the calculation upon which the statement is based has been made. A statement such as you have made, when left unsupported by detailed facts, is likely rather to injure the reputation of a machine than otherwise, because the natural inference is that the details cannot be satisfactorily given.

Mechanical ventilators are machines concerning which more erroneous statements are made than anything used on a colliery, and we must attribute the circumstance of furnace ventilation having always hitherto received the preference among practical men, not to any theoretical imperfection in the machines, which have from time to time been proposed, but to the disadvantages inseparable from a machine, and not existing with the furnace. The bare statement that you have made as to the powers of Messrs. Ridley and Jones's ventilator is, in my opinion, utterly worthless

and I will further state that the spiral chamber system, which constitutes their invention, is very far from being the best that has been tried. The fan at Elsecar was infinitely superior; and assuming mechanical ventilation to be admissible at all, there are half-a-dozen systems which would be preferable to the spiral chamber.

Your correspondent who writes upon the "Dangers of Mechanical Ventilation" states nothing but what is strictly true, as to the ventilation continuing long after the furnace has stopped, while it stops instantaneously upon the breakage of the ventilating-machine. But that is not all: a ventilating-machine is often supposed to be doing four times the work it really is—a mistake that can never occur with the furnace. It would not at all surprise me if upon closer investigation it is found that the current produced by Messrs. Ridley and Jones's ventilator is much nearer 20,000 than 100,000 cubic feet per minute; but even if it really does give 100,000 cubic feet as stated, I maintain that there would be greater safety with a furnace producing only 50,000 cubic feet per minute, more especially if the mine were a very fiery one, and extensively worked. The more men I might have in a fiery mine the less should I be inclined to risk their lives to anything but furnace ventilation.

I have known, in such inventions as Messrs. Ridley and Jones's, the capacity of the chambers to be measured, and the work done calculated from this measurement, and it may be that they have calculated upon the same principle. Thus, we will suppose that the West Ardsley machine is of the capacity of 700 cubic feet, and makes 150 revolutions per minute;  $700 \times 150 = 105,000$ , whence it is supposed that a current equal 105,000 cubic feet per minute is produced. This, however, is not the case. In practice such a machine, running at such a speed, would not produce 35,000 cubic feet per minute, even if permitted to draw its supply from the surface; if drawn through the mine the produce would be much less. I am not prepared to explain scientifically why this is so, but I know that practically it is. It does not follow that because a fan driven at 50 revolutions will produce 10,000 cubic feet per minute, the same fan driven at 100 revolutions per minute will produce 20,000 cubic feet, and it will be the same with the spiral chambers.

In your article you describe Messrs. Ridley and Jones's invention as a modification of some of the best forms of centrifugal-pump, which is no recommendation, as you will readily see from the following fact. While the International Exhibition was open, I have seen Messrs. Gwynne's large pump made to revolve at 50 revolutions per minute, without a pint of water being raised, and at 100 to 150 revolutions per minute there was a fair volume of water thrown—but with all centrifugal-pumps there is an enormous waste of power. A centrifugal-pump will not pump at all driven at a moderate speed, and the quantity pumped does not increase in proportion to the speed; yet this is what Messrs. Ridley and Jones would have us accept as the most efficient ventilator extant. A DOGGY.

Barnsley, Aug. 10.

## MESSRS. RIDLEY AND JONES'S PATENT TRUNK COAL CUTTING MACHINE.

SIR.—In our day it is pleasing to notice the steady progress in mechanical science. In almost all recent inventions introduced to public notice, whether by scientific men or "practical workmen," each of these inventions bear the impress of great utility, free from that complexity which characterised the earlier history of mechanical invention; not only is this so in mechanical science, but in every other branch of scientific discovery. In fact, it is a progress which commands our admiration, and often rivets the spectator to the spot, as he gazes in wonder at the new discoveries which are almost daily introduced to supersede manual labour. The sewing-machine, to a great extent, has superseded the tedious needle and thimble stitch-by-stitch operation of the poor needle-woman. Small as the needle is, it has sent more poor women to a premature grave than either the sword, famine, or any other agency for the destruction of the human race.

In our mechanical and manufacturing establishments machinery does all the drudgery, while the higher intellect of man alone is required to direct and control its power, and to feed it with the raw material. With the exception of the collier, in his unseen labours in the gloomy bowels of the earth, there is scarcely a branch of our national industry that has not within the last few years been completely revolutionised by the inventive genius of man; the intelligent workman is no longer a slave, but the director of powers of Nature which do the work for him, whether this be in forging the ponderous shaft, or weaving the most delicate texture.

Hitherto, as I before said, the labours of the collier have been exempted from the intrusion of machinery; the collier is still a slave in the gloomy caverns in the bowels of the earth, with the destructive fire-damp and deadly carbonic acid gas, and other dangers, for his sole companions. There he toils on in misery, unseen by the bulk of his fellow-countrymen, wielding his "heavy pick"—which, like the poor seamstress's needle, hurries him into a premature grave—digging coal, and sending it to the surface, to warm and cheer the fire-sides of the million, and also to carry on the great manufacturing and mercantile processes of our great commerce in every part of the globe. But at length the gloomy bowels of the earth are about to be invaded by machinery.

On Saturday last I inspected a new coal-cutting machine, at Mr. Middleton's factory, in the Borough, the invention of two intelligent gentlemen, Messrs. Ridley and Jones, which will do the present day's work of a collier while he is taking off his clothes, trimming his lamp, and collecting his tools on a morning to commence his labour. It is decidedly the best "iron collier" I ever witnessed. This tiny machine is only 27 in. high, 14 in. wide, and 36 in. in length; it runs on four small wheels, and on a pit tramway 14 in. wide, weighs only 10 cwt., with a cylinder 6 in. in diameter, worked by compressed air, it moves forward and backward at the pleasure of the man who directs its operation, and under the most perfect control. There stands the "iron collier," "pick in hand," it will strike a blow which will only crack a nut, or shiver a massive piece of rock into atoms.

It is capable of undercutting the coal from 3 feet to 4 feet in depth and 150 yards in length, in about 8 hours. It strikes 100 blows per minute with unerring aim; it leaves the coal behind it ready to be placed into the skip to be sent to the surface, with not one-fourth the waste the coal is subject to by the present hand labour of the collier. One man guides the tiny machine; a second follows it, and clears up the dirt it leaves behind. So admirable and compact are all its details, that the common colliery blacksmith can repair almost every part of it in case of breakage. In a word, it is the most perfect "collier" of its kind ever offered to the notice of colliery proprietors. Let me revert again to the amount of labour it is capable of performing, compared with that of the collier by hand labour. We have said it will undercut the coal from 3 feet to 4 feet deep, and for 150 yards in length per day. In most of our collieries the collier undercuts, on an average, about 6 yards in length 3 feet deep, for a day's work, for 3s., or (say) at 6d. per yard. At this rate 150 yards would require—

25 men, at 3s. per day .....	£3 15 0
By the machine:—1 man to direct the machine (say) per day ..	£0 5 0
" " 1 labourer to clear up the dirt, per day ..	0 3 6
" " 1 mechanic and 2 labourers to attend to air-pipes, say 11s. per day .....	0 11 0 = 0 19 6
Balance .....	£3 15 6

in favour of the machine over hand labour, to say nothing of the expense of safety-lamps, oil, tools, and tool sharpening, and other expenses.

It is the simple question of Machinery v. Labour, and we all know which is the most profitable. This, together, as I before stated, with not one-fourth the present loss of coal in the cutting. But it has another great advantage—the air discharged from it assists in ventilating the works. The machine is so small that it can be stowed away in a very small space when it has done its work. For the long wall system, lately advocated by me in the Journal, this machine is most admirably adapted, much better, perhaps, than it is for the stall and pillar system.

In these pressing times of colliery competition, when colliery proprietors can scarcely make the two ends meet, or even pay the interest on their invested capital, it will prove a boon indeed; and I should say our large colliery proprietors will not be slow to take advantage of its agency; while, as to the collier, it will rid him of the laborious toil he at present has to undergo for his daily bread. Much as I have already said, I have not done ample justice to this invaluable invention for colliery operations.

But its powers will not be confined to such work; it is capable of being applied to break stones on the common roads, square and dress blocks of stone in the quarry operations, undercutting the earth in railway cuttings, breaking up hard ground, and numerous other operations, where rough labour with the pick is required, and even for cutting trenches for draining land. I have simply mentioned these as operations to which the talented inventors may turn the machine to account, in addition to that of colliery operations, and I wish them every success. G. SHEPHERD, C.E.

26, Throgmorton-street, E.C., August 11.

## PATENT LAW REFORM NO DIFFICULTY.

SIR.—The fear of doing too much would appear to be the abomination of the British politician and statesman, hence the Patent Law of this country continues to remain the same confused heap of abuses; exciting ever and anon the denunciations of the jurist and man of science, and although a Royal Patent Law Commission has been appointed, and is now sitting, yet I fear unless we can get the commissioners to understand that a few simple alterations will satisfy the immediate exigencies of the case, we shall very likely have to wait till the Greek Kalends for any substantial measure of amendment. Viewing the matter thus, I would once again ask for space in the Journal to propose a few simple alterations for consideration, which alterations will involve no radical changes in the law, interfere with no vested interests, and in no wise trench upon the delicate question of Royal prerogative; yet, at the same time, they would be productive of much advantage to inventors and patentees, and of considerable benefit to the public at large.

First, then, the present five pounds stamp duties might be reduced to three pounds each, in which case provisional protection could be obtained for three pounds instead of five pounds; and the patent could be sealed, specified, and completed for fifteen pounds, instead of costing twenty-five pounds, as is now the case.

Further, following the same ratio of reduction, the third year stamp duty could be fixed at thirty pounds, and the stamp duty payable at the seventh year at sixty pounds. As I have before recommended, the books of abridgments of specifications should be published on all those subjects now untouched, and all subjects should be kept *in court* by means of yearly or two-yearly supplements. Not being myself over sanguine as to the desirability of the official investigation system, I would also repeat my old suggestion, which might be adopted and tried as a substitute for that system—namely, that everyone applying for a patent should be called upon to make use of the above-mentioned abridgments, and investigate for himself, to ensure which no patent should be allowed to proceed without a second declaration by the applicant of his belief that he is the first and true inventor, although he has made the required investigation.

Furthermore, the amendment of the provisional specification should be allowed whenever needful, provided that notice be first given by gazetting or public advertisement, with liberty for all persons likely to be affected by the proposed amendment to oppose it. With regard to opposition, the present blindfold system should be altered by first reducing the fee for registering the notice of particulars of objections from two pounds, the present charge, to a charge of ten shillings in future, and by either permitting the provisional specification of the invention objected to to be inspected before proceeding to the hearing of the opposition, or by causing the notice of particulars of objections to be compared (by competent officials) with the provisional specification in question without any further fee, thus rectifying the present absurd system of carrying on oppositions upon the mere surmise that Jones, Brown, or Robinson's application for a patent, for improvements in steam-engines for instance, may possibly be for the same improvements as those invented by the opponents. The further proceedings, as to hearing and so forth, to remain as now. Also, anyone having new improvements upon a patent formerly granted to him, which improvements necessitate the use of the whole or part of the original patent, should be allowed to add the same to his original patent upon the payment of a small fee (say three pounds), the allowance of such addition to be subject to the same rules as the allowance of disclaimers and memoranda of attraction now are.

The confirmation of letters patent, which refer to inventions afterwards found to be wanting in novelty, should be dealt with more liberally than heretofore, so that no patent shall hereafter become absolutely forfeited, because some one, many years ago, patented a somewhat similar thing, which was never brought into practical use, or which some one had formerly used to a very limited extent, in some out-of-the-way place, where it never attracted the attention of the public; provided, of course, that the new patentee has really brought his invention into public operation. The best rule in such matters appearing to be, that one who brings into public use a valuable industrial improvement should not lose his rights because some one had previously made an unsuccessful attempt to do the like.

Applications for a second provisional protection before the expiration of the first should be thoroughly legalised, and this without regard to whether, during the first provisional protection, the invention may have been published or not; all such second applications, however, to be open to be second applications, and advertised for opposition as such. A judicial commissioner, or a special court of patents, is likewise a great desideratum, which commissioner or court should be charged with the revision of all the proceedings of the Patent Office officials, and the adjudication of all causes relating to patents. This court should have the same power as a county court, and be enabled to try cases without a jury, or with a common jury, or with a scientific jury, as proposed by the Inventors' Institute. F. W. CAMPBELL.

## NEW SYSTEM OF GEOLOGY AND ASTRONOMY—No. IV.

SIR.—In my last letter I treated of the planets and their moons, and in the present I am to treat of the still more difficult subject of comets, which will complete what I have to say of the solar system. All parts of a body, however large, must, of necessity, rotate in the same space of time. That being so, it follows that the outer surface must go round quicker than the internal parts. For instance, the speed of the earth at its surface is 1000 miles per hour, but at a point near its centre the speed would only be 100 miles per hour. The diameter there will only be one-tenth of the diameter at the surface, consequently the speed of rotation will only be one-tenth of what it is at the surface.

The sun, from west to east, takes twenty-five days to perform his rotation. This is ascertained by the departure and return of the spots on its surface. This speed is twenty-five times slower than the rotation of the earth, for the earth goes round in one day. I have already explained that the size of a body has nothing to do with the time of its rotation, so that the sun actually moves twenty-five times slower than the earth. Jupiter performs his rotation in ten hours, so that the sun goes no less than sixty times slower than Jupiter.

The speed of the sun's present surface is 4000 miles per hour, but if the sun were extended to Neptune, which it probably was when that planet was created, his speed would be no less than 20,000,000 of miles per hour. With a body in motion at so inconceivable a velocity there is no difficulty in perceiving how the planets were thrown off. Neither can we be at a loss to see how the planets got their original impetus, for the body thrown off would retain the same impulse as that of the parent stock.

When chemical action within the sun began that would cause rotation for there can be no action without motion, and that is the probable beginning of creation. Motion begins in the centre of the sun, which would then be only a vast mass of air or nebulous matter. The rotation of the sun causes the formation of the comets and planets, and not only imparts to them their respective motions, but holds them in their places ever since.

The number of comets which traverse the solar system is very great, several hundreds having been seen at different times. Although the substance composing these bodies is extremely light, probably not so heavy as atmospheric air, yet what they want in density they make up in bulk, for several of them are as large as the sun. But though the comets are so much larger, the solid matter contained in them will not exceed that of an ordinary sized planet.

The orbits of the comets are not confined to the plane in which the planets move, for they circumnavigate the entire area of the solar system in every possible direction. Having spent their force outwards, they return to the sun, in accordance with the law of gravitation. The peculiarity of the orbit of a comet is that it is much more oval than that of a planet, approaching very near the sun at one time, and going far off at another. The periods of the comets vary from two to two thousand years, those with the longest periods being the oldest comets, and those with the shortest periods the youngest. The speed of the comets round the sun regularly falls off as they recede from that luminary, according to the law of gravitation, as in the case of the planets, for they go quick when they are near the sun, and slow when they are far off. The brilliant comet of 1859, which we all recollect to have seen, travelled at the rate of 600,000 miles per hour when near the sun, and many of the comets have a much more rapid motion than even that.

The comets may be supposed to be similar in substance to the sun when they were thrown off from that body. They are probably composed of air, slightly luminous, and very transparent, for stars are visible through all parts of them. If Mr. Gläusier were to enter a comet with his balloon, he would report that he had passed through a beautiful climate, which was warm and well-lighted, and free from those changes of temperature caused by the alternate return of day and night, for in the comets it is eternal day.

It is impossible to doubt that all the comets rotate on their axis; for as



they have come from the sun, they would get that motion as well as the planets; and on looking at the comets through a good telescope, they present the appearance of a body turning on its axis. The tail of a comet is always turned away from the sun, whether the comet is approaching or receding from that body. The peculiar shape of those comets which have tails admits of a very simple explanation. These comets, when at a distance from the sun, will be of an oval shape, in consequence of their rotation; but when they approach nearer to the sun, their orbit speed is greatly increased, when their shapes change. The oval becomes an elongated body, with a head and a tail, which are its poles. The comet will thus rotate lengthwise from pole to pole. The comets without tails are those with a short period and slow motion, showing that the peculiar shape of the comets is owing to their rotation and orbit speed, and the extreme lightness of the materials of which they are composed.

If I am asked why the comets should be self-luminous and not the planets, I answer that the atmospheres of the planets have been exhausted of their luminous properties by the deposition of the rocks which form their solid part, whereas in the comets no such deposition has taken place. The comets have retained their luminous atmospheres the same as when they first received them from the sun.

I have shown that when the sun was a thousand times larger than it is now its rotation at its surface would be 20,000,000 of miles per hour. When the sun was going round at this fearful velocity, it would impart to the comets thrown off that enormous projectile force which they have, which carries them out to the extreme limits of the solar system. The comets first thrown off would have the greatest projectile force, and their period of revolution would be great—say, two or three thousand years, while the period of the last thrown off would be proportionately short—say, two or three years.

As the comets are the lightest bodies known, they would be thrown off before the planets, for the lightest parts of the sun would go off first. That comets, the oldest creations of the solar system after the sun, will ever be condensed into planets and moons, and so become fit for habitation, I do not think probable. Countless ages have already passed away without producing any such result upon them; it is, therefore, only fair to conclude that they are intended to remain as they are.

But although the comets are not likely ever to become inhabited worlds, they doubtless perform important functions in the economy of nature, which are essential to its very existence. The comets may be considered the carriers of gases and electric fluids to and from all parts of the solar system. They are the arteries and veins of the celestial system, as the metallic courses in the rocks are the veins and arteries of the earth. If I am asked if the sun is likely to throw off any more comets or planets, I answer in the negative. It is true that some of the spots on the sun's surface are very large, some of them being not less than 40,000 miles in diameter, and these are all situated near the sun's equator. Yet the great reduction of the speed of the sun makes the throwing off of new bodies much less probable now than when the sun was larger. The sun's rotation is now only 4000 miles per hour, whereas when Mercury, the last born of the planets, was created, the sun's rotation would be 160,000 miles per hour. The projectile force of the sun would then be 40 times greater than it is now, and for that reason the creation of comets and planets may be considered complete.

The sun is upwards of seven hundred times larger than all the planets and moons put together. But when to the planets we add the comets, I am inclined to think that the sun will be exactly balanced by the comets and planets taken collectively. In this way will the sun balance the planets and comets, and these, in their turn, will balance the sun.

The result of the enquiry may be briefly stated thus. The entire area of the solar system was originally filled by the sun. The comets were first thrown off, which reduces the sun to a diameter of about ten thousand millions of miles, or four times the distance of Neptune from the sun. I arrive at what I have supposed to be the extreme limit of the planets by the decrease of velocity, which gives me the area occupied by the planets known and unknown.

The comets fairly launched into space, the planets, one after the other, are created or thrown off, which reduces the sun to its present size of something less than one million of miles in diameter. The planets are at first very large, but by throwing off their moons they are reduced in size, when they assume the sizes, forms, and orbits they now have.

It has often been said—"Show us how the planets first got their projectile force, and we will explain everything else;" and that secret, the solution of which is so much longed for, is, I trust, now revealed. Motion began in the centre of the sun, and that motion was imparted by the sun to the comets and planets. The polarisation of matter is the origin of motion and life, and that is the energy of the Divine existence throughout the created universe. It has been said that a little learning is a dangerous thing, for it often leads to scepticism, and so it is. It is because we leave off half way in our enquiries that we are left in the cold regions of scepticism; but carry the enquiry to its legitimate issue and we shall make a safe landing in the region of belief. Truth is belief, and it is by refusing to accept the whole truth that we become unbelievers.

If the sun has an orbit motion, it will be around another sun, which will balance it, and keep it fixed in its place in the heavens. If this is so, the centre of gravity of the system will fall at a point in space somewhere half-way between our sun and the sister sun with which it is connected. The orbit motion of the sun is supposed to be about 50,000 miles per hour, and as a great number of the stars appear to be double, the one revolving round the other, I think it very probable that our solar system has a movement in space around some other solar system.

I have read the interesting letter of "Cosmo" very carefully. He speaks of my theory of the sun being the origin of the planets as an exploded one, because many of the nebulae, which were at one time supposed to be floating masses of air, have turned out, on a closer inspection, to be clusters of stars. But that discovery does not necessarily affect my theory in the slightest degree. I quite agree with your correspondent that Mr. Ennor's idea, that there are some secrets of Nature which must ever remain unknown to us, is absurd. No man is able to say what may not be discovered. The only safe method is to consider everything within the reach of man's capacity; for the moment we attempt to dictate limits to the mind, we find ourselves in fetters which must be broken. The idea of obtaining knowledge, referred to by "Cosmo," by inspiration, is one which is much commoner than we are apt to imagine. For myself, I do not believe in modern inspiration, for all I know I have received by working myself. I first collect a few simple facts, and then cast about for theories to meet these facts, and in this way knowledge is increased.

It has been said that Kepler got his knowledge of the stars by guessing, but that is evidently a mistake. Kepler was a great observer of the heavens, and it was no doubt by trying different theories to account for the facts he observed that he arrived at those laws which bear his name, and which to this day form the basis of the science of astronomy. Galileo enjoys a greater reputation than Kepler, because his discoveries are more practical, being got by improvements on the telescope. For my part, I consider the discoveries of the closest most valuable than those of observation, and if our modern astronomers would use their brains more than their telescopes they would make more discoveries worthy of the name than they now do.

In my last letter I showed that the primary source of heat and light was not the sun but the atmosphere. Jupiter appears as bright to us as Venus, although he is seven times further off. Now, if Jupiter had been lighted by the sun he would have appeared much less brilliant to us than Venus. The reason why Jupiter appears so bright is because he is surrounded by a magnificent atmosphere. Capt. Maury, in his noble work on the sea and the atmosphere, states that there exists on the earth two zones of calms, where there is no wind, and nothing but rain and fogs. These zones will have the appearance of belts on the earth to the inhabitants of Jupiter, similar to the three belts which we see on the surface of that planet.

The sun is said to be one and a quarter times the weight of water, or the same density as Jupiter. I should like if any of your correspondents would let us know how these densities of the astronomers have been arrived at, for to me they seem all wrong. The weight of the earth is stated at five times that of water; but if we assume two-thirds of the earth's bulk to be hollow, which is more than probable, that will give fifteen times the weight of water for the density of the crust. The actual weight of minerals in the bottom of the deepest mines is not more than three times the weight of water; neither is there any indication of the metals becoming heavier were we to descend ever so far into the bowels of the earth. If the specific gravity of the earth had been set down as the same as water, that estimate would have been supported by actual facts; but, as five times that weight is given, I am disposed to call it in question. The same remark will apply to all the heavenly bodies, their respective densities being stated five times greater than we are warranted in assigning to them.

True philosophy is to combine theory with practice. All practice is not philosophy, neither is all theory, but the combination of both. The practical man is apt to despise the theorist, and the theorist the practical man; but in so doing both are equally in the wrong. Let the two compare notes, and condescend to learn from each other's experience, and they will arrive at the truth, and be rewarded by brilliant discoveries in morals as well as physics. The ultimate and proper object of all science is to discover the causes and reasons of things; and yet that object is entirely lost sight of by the generality of writers. Truth is easily found, if that be the object; but if the object be to fill great books, and give them the appearance of much learning, of course, no discovery of truth can be made.

Sloane-street, Chelsea.

A. ALISON.

## CORNISH MINES AND SUPPLIES.

SIR.—Can some of your correspondents inform me how the price of mining materials differ so enormously in different localities? In the article of Norway timber, for instance, which is so largely used, and consequently forming a serious item in the monthly cost of working mines in Devon and Cornwall, the consumption being upwards of one hundred thousand loads annually, it appears there is no rule by which a London shareholder can compare the charges of different mines.

Having shares in mines in the neighbourhood of Tavistock, Liskeard, Bodmin, Truro, Camborne, Hayle, and Penzance, and comparing the bills for timber charged at the various mines when at the secretary's office, in London, judge of my surprise to find the price of every district widely different, and the only explanation which I could get of the secretary was, that the different localities had their own peculiar mode of measurement. Surely this is a very unsatisfactory explanation to any London shareholder. Her Majesty has her officers in every port where the article is imported, and before he is admitted into the Customs he must pass a certain, as I am told, strict examination. Now, I want to know whether the authorities have to instruct the Custom House officer as to the various measurements in the different ports, or whether there is one universal practice throughout Great Britain; and if so, why should the consumers be deprived of the privilege of buying timber by Custom House measure in Cornwall, as well as in other parts of England, Scotland, and Ireland? I could then have some check upon the relative charges in the various districts in which I am a considerable—

Aug. 12.

ADVENTURER.

## NON-PAYMENT OF CALLS.

SIR.—I am glad to see that the subject of non-payment of calls has now begun to attract some notice. The evil is a great and crying one, and in consequence of illegitimate speculation by people whose means do not justify it is very much on the increase. It is hard that payers should have to pay for non-payers, which it needs no great amount of reasoning to show that they do. The evil is encouraged and nurtured by the private friendships and business connections between shareholders and secretaries, interrupting the proper course by which all calls should be duly enforced. The remedy for the evil lies with the adventurers, and let me impress upon some one or two independent men to make a point of attending all the meetings of their mines, and strictly investigating the amount and character of arrears, and insisting on their immediate payment; and in order to effect this, let them not be put off with an assurance from the authorities that "all will be right," and so on, but pass resolutions (not of a general character) fixing limits for payment of arrears. This is the only course that will tend to check the present state of things. I, for one, have been a punctual payer, but will not pay another penny while any calls are in arrears. This, too, must soon bring people to their senses.

STAND FIRM.

## LOOK TO YOUR ARTICLES OF ASSOCIATION.

SIR.—The courteous and able writer in last week's Journal draws attention to a subject highly important to all capitalists embarking in limited liability enterprises. The Joint-Stock Companies Act of 1856 gave power to each company to frame its own Articles of Association, and very objectionable conditions were not unfrequently introduced. The Companies Act of 1862 abolished this evil, by placing the power in the hands of the shareholders, and requiring that where any departure from the form prescribed in the Act was sought, it should be proposed and adopted at two extraordinary general meetings of the shareholders duly convened, and in the form of a special resolution. In the case alluded to by your correspondent there were, from inadvertence, four general meetings held, at each of which the special resolution proposed in lieu of the regulations contained in the table marked A in the first schedule of the Act, was considered and unanimously adopted. At the first every clause was submitted and considered. The resolution was framed under, and approved by, eminent counsel of considerable experience; and his attention has again been called to clause 39—objected to by your correspondent. His opinion is that the clause is a great protection to directors and the steadier class of shareholders; that it preserves the power to prevent dishonourable shareholders from transferring their shares to men of straw, in cases where an adventure is not successful, and leaving the more honourable to bear the whole burden of a failing concern. That the directors can in any and every case waive the regulations as to transfer of shares not fully paid up, and can state generally they do not intend to enforce compliance with the article 39; they may in practice ignore it, reserving the power to exercise it only when the interests of all the shareholders demand its enforcement. This is the practice with the directors, and, happily, the prospects of the adventure are so favourable that it is very probable clause 39 will never be enforced.

H. BROOK,

Secretary to the Great Devon and Bedford (Colcharton) Mining Company.

## AMERICAN ENTERPRISE.

## A GRAND TRUNK RAILWAY, 1858 MILES LONG.

SIR.—Some time since we noticed there would be a great demand for English railroad iron for this country within a short period; it now becomes our pleasing duty to announce that the above-mentioned undertaking has commenced, and is being prosecuted with as much vigour as the present unsettled state of the country will admit of. The great scarcity of labourers, however, materially retards its otherwise rapid progress, and in all probability will do so until the close of the war, unless immigration sets in more actively than at present. A great number of persons, it is true, are arriving every week from Ireland, Wales, and Germany, but the great bulk of these are absorbed in the agricultural districts, where a great dearth of labourers prevail, while some few, and that perhaps only a very few, attracted by the bounty offered by Government, enter the army or navy; consequently, a very small proportion are available for works so far distant from the sea ports as Missouri or California.

This line of railway starts from Missouri, passes through Kansas, crosses the Sierra Nevada mountains, and terminates at tide water in Sacramento, California; thus opening up a direct railway communication across the North American continent from the Atlantic to the Pacific Oceans. The work, which is divided into three sections, has been commenced at both ends, and in a short time will be energetically pushed on in the centre. The eastern portion has been taken by a Kansas company, and already the line has been graded for over 300 miles from the junction of the Kansas and Missouri rivers going west; and by the end of the present year, if labour can be procured, the line will be completed, so far as the earth-works are concerned, entirely through the State of Kansas.

The central portion, a distance of about 1000 miles, is the most difficult part; it crosses the Sierras at Summit Valley, at an elevation of 7027 ft. above tide water level at Sacramento City, but the line has been so laid out that the steepest gradients do not exceed 105 ft. to the mile—a rate of inclination several feet less than one of the lines passing through Virginia. The western slopes of the great mountain range have presented many difficulties. There are many rivers running through gorges from 500 to 2000 ft. deep, with their precipitous slopes varying from perpendicular to an angle of 45 degrees. To avoid these the surveyors have run the line along the most unbroken ridges, and although somewhat extending its length will, it is said, only cross one river (the Little Bear river) of any magnitude. The eastern declivity is not so difficult, although there will be eighteen tunnels to drive, varying from 300 to 2000 ft. each. Part of this section, or about 155 miles, will cost \$85,000 per mile.

A special chartered company has been formed to construct this central portion, called the Pacific Union Company. They will be assisted to the extent of about 350 miles by the Mormons, should it be decided to make a short divergence of the line, so as to pass through Salt Lake City, in the Utah territory, but as yet we have no positive information on this head. The western division is being constructed by a Californian company. They have already completed 60 miles of the road at the Sacramento end, and are now only waiting the arrivals of the metals from England to get it into running order. This section of the line passes through heavily wooded forests of fir, cedar, pitch pine, oak, and tamarac, furnishing cheap and ample materials for sleepers, bridges, and buildings. Their capital is

\$15,000,000, the estimated traffic returns are \$4,000,000 per annum, while the working cost is not to exceed \$1,000,000. If the work can be done within these figures, and their estimated returns realised, the stockholders may anticipate a dividend of about 25 per cent.

This western portion of the line will speedily open up immense mineral wealth, now lying dormant for want of transportation. It is a well-known fact that there is at the present time large quantities of low grade silver ores being thrown aside that would pay well for returning if some cheap means of carriage to the coast could be obtained, beside rich lead and copper mines in abundance.

The cost of the entire line, we are informed, will amount to \$90,000,000, or \$53,175 per mile average, which reduced to English currency will be 10,974 £ per mile. The amount appears small when the distance to where the materials are to be conveyed is taken into consideration. We are inclined to think that 25 per cent. at least should be added to the estimated capital for the completion of the works; nevertheless, whether the cost exceeds the engineer's estimate or not, many are sanguine that the entire line will be executed and in working within seven years from this date.

Such, then, is one of those gigantic projects that mark the progress of the age in which we live—a work which, when completed, will open out to industrial enterprise over 150,000 square miles of mineral and agricultural territory, abounding in all the requisites essential for the support, wealth, and happiness of millions of mankind—a latter-day Canaan, a land of promise, where men of all nations, grades, and classes, free and independent, may with industry find a home of peace, plenty, and competence; a new epoch in the march of civilisation towards the great West will date from the accomplishment of this great work. Its inauguration will bring numerous wild Indian tribes, now the scourge and terror of all emigrants by the overland route, under subjection, and in a few years, by inculcating the mild principles of Christianity, convert them from savages into useful, peaceful, law-abiding citizens.

One of the great questions of the day now agitating the minds of the entire political community of this country is the "abolition of slavery." It is a matter of very serious importance, and one not to be rashly decided, for to liberate at once 4,000,000 slaves without first finding suitable means for their employment and support would be a rash policy, and prove suicidal in its results. To retain this accursed institution after the cessation of present hostilities (of which it has been the chief cause) would be to cast an indelible stain on the fair escutcheon of a country whose avowed principles are universal freedom. If gradual, compensated emancipation should be the final resolve of the Government and people, and the latter say *vox populi* shall rule, the case will assume a tangible form, and the remedy for existing evils will only become a matter of time. Should such be the much-to-be-wished-for consummation, then those extensive and almost uninhabited, but rich and fertile, territories of Northern Texas, Nebraska, Utah, Sonora, and New Mexico, opened up by means of branch railways from the main trunk line to colonisation, afford ample scope for the profitable employment of all the surplus negro population of the Southern States. But the end of the war is not yet, and before its close other interests or elements may commingle to materially alter its programme. Should, however, European nations, as a unit, continue to maintain a strict neutrality, it is not difficult to foresee its final result; but on this contingency, and this alone, hangs the chances whether or not the motto *E pluribus unum* can or shall be maintained.

CHARLES S. RICHARDSON.

Kanawha Court-house, West Virginia, July 25.

## INVESTMENT OF CAPITAL—MINES AND SLATE QUARRIES.

SIR.—In my former letter to the Journal, I made a few remarks on the principal slate veins—the Bethesda Quarry, which belongs to the Hon. Colonel Pennant; the Llanberis Quarry, which belongs to Mr. Aasheton Smith; Nantybettws, and Nantlle Vale Slate Quarries, these have been opened on the Cambrian stratification. The next regular vein is Castell Cidwen and Moelfra; then the Festiniog slate vein, upon which are opened Croesor, Rhosydd; Messrs. Holland, Mathews, Greaves, and Lord Palmerston's quarries, all of these are on the regular Festiniog stratification. There are several slate quarries beside the above worked in this district, which are not on the vein alluded to. The next slate and slab vein, and also the last regular seam, is the Abercorris and Aberllynfi Quarries; this vein differs in cleavage, joints, quality, and colour to those before mentioned, but there is a slight resemblance in the position to the Festiniog vein, only the dip is not so great; the split is also vertical, while at Festiniog the split follows the dip of the vein. The principal veins I have described are different in so many points and position, that it is necessary to work them on a distinct system. The position of the Cambrian vein being perpendicular, requires all quarries on this vein to be opened on the same method—that is, the top soil to be cleared on both sides of the opening, and continued doing so as the quarry extends; if this is not done the pressure of the unremoved soil will cause an overthrow, for the opening would not bear the burden on the side of the rock. It requires a man who thoroughly understands the slate stratum to make a successful operation on this vein; with proper knowledge, a trial may be made by a sink and tunnel—this would prove the nature of the ground; after this it comes to a matter of calculation. In some places on this vein the appearance of the surface warrants what may be expected below; in other cases this may prove contrary to expectations. On account of some unforeseen dykes and spars also, there are places on this seam where the surface is covered with clay and gravel, the outward appearance of which shows no indication of slate, only that it is situated on the stratification; in this case sinking and tunnelling are the only modes of proving the ground; an experiment in this manner may be made at a very little expense by a man who possesses good judgment of the place. Deficiency in these precautions is the great error committed by capitalists in opening and clearing places where no slate vein exists; such mistakes have been ruinous to many, in consequence of entrusting the management of the openings to a London, Manchester, or other gentleman, who perhaps had never seen a slate quarry before; the failure of this class of men is generally attributed to the quarries and locality, when, in reality, Wales, nor the practical men of Wales, had never been concerned in such blunders and destruction of property. It is also of importance in opening a slate quarry to know the position of the rock, as this is the foundation, to form plans, to prove the ground, to know the quality and value of the concern; this point ought to be carefully examined, as in all matters of slate speculation calculation must be the principal theory before bringing quarries into the market, and capitalists ought to look into the correctness of it before trusting their money upon such speculations.

The first thing in quarry calculation is the ground, to ascertain if the situation is on one of the principal veins before mentioned; then the quality, the extent, and position, the requisite expenditure, the expense of carriage to a railway or shipping port, and the return of produce. On the vertical stratum, when the ground has been fairly proved, the top soil must be cleared so many yards in length, width, and depth before any slates can be expected; then a gallery must be formed—this will generally indicate a favourable or an unfavourable prospect of the quarry; if the former, some good horizontal points will appear connected with what we term "backs" with the proper joints alluded to, the rock improving and getting firmer as the depth increases; some slates can soon be made, even from the second gallery, so the general average of opening a new quarry is clearing the top soil, sinking and opening a second gallery; when this is done to a certain extent, this gallery might produce some inferior slates, the value of which in the market would realise more than what has been paid for the manufacturing of them. In some instances I have found the second gallery producing more slates in value than the expense of removing the top soil and forming the gallery, but generally time and capital are requisite to form a proper system of working a quarry. When the second gallery is formed, so as to admit of a third gallery, then the latter will allow a fourth gallery, &c. Now it comes to a point of a profitable or an unprofitable concern. When these galleries are properly formed and prospects good, slates can be manufactured at the following prices:—

Emperors—	26 x 16,	manuf. at £1 12 6 per 1000, sold at £13 0 0 per 1000.
26 x 14,	"	1 10 0 " " 11 15 0 "
24 x 14,	"	1 7 6 " " 10 15 0 "
24 x 12,	"	1 5 0 " " 9 9 0 "
22 x 12,	"	1 2 6 " " 7 15 0 "
20 x 10,	"	1 0 0 " " 6 8 0 "

If the rock is good the slates can be made at the above standard price, if not a poundage is given on every 14, worth of slates that is made from 2s. 6d. to 40s. in 14, and this is regulated according to the prospects of the slate bargains for one month—all the slates are paid for at the quarry by the thousands. The prices alluded to include the taking of the slate blocks from the rock, splitting, squaring, and making complete for the market. The prices generally paid for removing the top soil average from 2½d. to 7d. per ton, according to the nature of the ground and the distance to deposit the soil. Sinking is paid by the yard,



from 5s. to 60s. per yard; opening from 3s. to 10s. per yard; the carriage of slates to a shipping port averages from 4s. to 10s. per ton. With the prices of labour, &c., an estimate can easily be formed of the average amount of capital and the probable return of produce. The selling price of manufactured slates amounts to 50s. per ton, or thereabout; taking into consideration that every cubic yard of rock will weigh 2 tons, or near that, of slate, we clearly find that one small concern, if it is pure, is unsurpassed in value. A surface of 100 square yards of solid rock, and that 100 yards in depth (of this there has been a proof made), by multiplying the above figures will show 2,000,000 tons of slate blocks within the area mentioned, independent of the extent of the vein downwards beyond the 100 yards alluded to. The average I lay before you is small in comparison to many quarries that are now worked in Wales; I could name such openings as before specified to the extent of 1000 and 2000 yards. But let it be understood I have never seen a quarry opened that is all pure slate rock, yet we often find some much better than others. Slate is similar to the mineral lodes in this respect, for in these, whether in large or small quantities, is found more or less waste and refuse mixed with the ore. Although sometimes a solid cluster of copper or lead may be discovered with very little waste, generally these lodes are mixed with refuse; I find this to be always the case with slate quarries; in one part an extensive vein is discovered with comparatively very little refuse, when the same vein in another locality is full of waste, so that the produce is not within 100 per cent. to the former place. I also find in the Cambrian stratification that the vein is larger and more pure eastward than it is westward.

The extreme east is the Hon. Colonel Pennant's quarry, but westward of this we find small and irregular concerns. The largest vein at the Bethesda Quarry is the one known at Nantlle Vale by the name of the New Cae Cilgwyn Penyrorsedd Quarry. The south vein at this quarry is the north vein at the Bethesda Quarry; this seam is also worked at Bryn, and other quarries in the neighbourhood of Bethesda. The great vein of the Llanberis Quarry we find at the old Penyrorsedd Nantlle Vale. The above assertions on the veins have been proved by a very minute examination of the strata, colour, spots, and strips. Westward of the above principal vein at Nantlle Vale, and on the opposite side of the lake, are several small concerns, the produce of which is a sufficient foundation for my remarks about this vein westward. On the east of the above valley is the Penyrorsedd Quarry, which has been extensively opened, and, as I have mentioned, bears great resemblance to the Bethesda and Llanberis Quarries, in the extent of ground, the stratum, joints, colour, split, and quality, the facility of opening and working, and the regularity of the vein. There are quarries on the boundary of Penyrorsedd extensively opened, and paying good profit. But westward of the above quarries, and on the other side of the lake, I find the same veins are so irregular and broken by eruptions, that so far they are very unpromising of ever being profitable concerns, although capitalists have and are still spending an immense amount on this westward seam, with only seeming most indifferent prospects. In finishing my remarks on the Cambrian stratification, I may say that, with all the difficulties we have to encounter in slate speculations, take it as a general rule, a slate quarry is easier to form a correct opinion of as to its being a profitable concern than any other vein. The body of slate is so extensive in comparison to the other lodes. Slate may be also worked with so much less capital than the metals. With practical management, cautious and proper attention, speculators may make their fortunes in the Welsh slate quarries.

The slate trade is too well known to make any remarks upon. The number of slates that are manufactured per annum are not nearly sufficient for the demand in the market. I am informed that some quarries have booked orders for 40 to 60 weeks to come. Orders for slate are sent from all quarters of the globe; large numbers are continually shipped to Russia, France, Spain, Germany, Denmark, Prussia, Austria, and America, although the sale to the latter place has not been so good within the last two years. In consequence of the enormous demand the prices have advanced several times; and if they were raised 15 or 20 per cent. again the sale, in all probability, would not be affected, as there are so many new markets continually opening. I can only say that the slate quarry proprietors and merchants are reaping a fine harvest. It is seldom we hear of a slate merchant being bankrupt, but to the contrary. The prices of slates are generally uniform throughout the principality. The alteration in terms is arranged at the principal quarries—the others follow the same rule, only in some instances the small concerns charge extra percentage. If the slate makers and labourers continue to demand more than their usual wages I have no hesitation in saying there will be another advance in the price of slates. The average wages of the men are—slate makers from 16s. to 20s. per week; labourers from 14s. to 18s. per week. Miners, 15s. to 18s. per week; engine-drivers, smiths, and carpenters, from 16s. to 24s. per week. Each slate maker is capable of manufacturing about 67. to 87. worth of slates per week.

CAMBRIAN ERYR.

## THE SLATE QUARRIES OF GREAT BRITAIN.

SIR,—Having read an article in the Journal a few weeks since, treating of the important subject of the Slate Quarries of Great Britain, I venture to offer some observations, as a practical mineralogist, which may tend to modify the strictures made on Cornish slate; and I am the more induced to address you on this point, because I feel confident that your well-known love of fair play will induce you to give publicity to all that can be stated on both sides of the question. Surely, it is quite a modern discovery that the Cornish slate from the Delabole district is brittle, or the loss by breakage very great; and I never heard till now that the split, or cleavage, was inferior to that of the Welsh slate. Again, is it a fact Delabole slates are heavier than Welsh slates of the same size? They are stronger and more compact in their texture, so that they stand the weather better than Welsh slate; and, in fact, they have been tested, and proved to be 25 per cent. stronger than the best Bangor slate, but I doubt if they will be found much heavier than Welsh of the same sizes. All geologists who have written on the qualities of the slate from the Delabole district (which will include Old Delabole, North Delabole, West Delabole, and Trewarmett Delabole Quarries) have concurred in ranking these slates as the finest in the world for toughness, strength, and durability, and they particularly notice their lightness. Sir Henry T. De la Beche, F.R.S., &c., Director of the Ordnance Geological Survey, in his report on the Geology of Cornwall, published by order of the Lords Commissioners of Her Majesty's Treasury, pp. 503, 504, says—"The Delabole Quarries have been long celebrated for producing a beautiful and durable material, combining considerable lightness with strength; the flag stones, or struck slates, from these quarries are highly esteemed; they are exceedingly durable, and not liable to be damaged by frost." Bishop Watson, in his Chemical Essay, vol. 4, p. 319, writes thus—"We learn from Dr. Borlase, that the grey-blue slate of Delabole, in Cornwall, weighs only 2512 ozs. per 100 feet, which is greatly less than the lightest Westmoreland slate that I have met with. This Cornish slate, from its lightness and endurance of weather, is generally preferred to any in Great Britain, and is, perhaps, the finest in the world." And so long ago as the year 1602, Carew, in his "Survey of Cornwall," speaking of the Delabole slate, quaintly describes it thus—"In substance thinnish, in colour faire, in weight light, lasting, strong, and generally carrieth so good regard as (besides the supply for home provision) great store is yearly conveyed by shipping both to other parts of the realm, and also beyond the seas into Brittainie and Zetherland." It is a long step from 1602 to 1850, yet for two centuries and a half Delabole has held its good reputation against all the world; for in the latter year Prof. Marsh, F.R.S., &c. (Faraday's Lectures at the Royal Military College, Woolwich), writes—"The best covering slate in Cornwall, or, perhaps, in England, is procured at Delabole, nearly two miles south of Tintagel, in the north part of that county; the colour is grey-blue, and the texture is so close that it will ring like a piece of metal when struck." And in 1855, Prof. Allen Miller, of King's College, London, after making a comparative analysis of the slates from the Trewarmett Delabole and the Old Delabole Quarries, found the two slates to correspond almost exactly in appearance and properties, the Trewarmett being rather the lightest of the two, very compact, and non-absorbent in texture (a small cistern made of this slate was found after a week's immersion in water to have increased in weight only 1-393d part) and possessing great power of resisting the action of frost. After such a weight of evidence in favour of Delabole slates, it may seem unnecessary to add that the London dealers will take ten times more than can be raised in the district, and at prices as high as the best Bangor slates can command. But it is objected that Cornish slates are sometimes made across instead of in the direction of the grain. I am aware that in some slate this would weaken its strength; but it is notorious that the slates taken from the Delabole district possess nearly an equal strength both ways, which gives them a preference over all other slates, because the manufacturer can cut them to any size, without regard to the direction of the grain. Having said so much for the slate itself, allow me to correct an impression

(which the article I have mentioned is likely to convey) that there are no mountains of slate in Cornwall. The North Delabole, in the parish of Tintagel, is one mountain of slate rock; and from this, a few hundred yards across the valley, you strike the Trewarmett Delabole ridge, where the best class of roofing slate can be manufactured within 5 feet of the surface, with a valley 300 feet deep for the deposit of the waste or spoiled; whilst at the West Delabole Quarries the whole cliff, which is 400 ft. high, displays veins of the finest slate, which are worked without pumping or hoisting, at a cost infinitely cheaper than any quarry in Wales. There are quarries now at work in the Delabole district paying over 30 per cent. profit on the outlay, and the Old Delabole lands contain beds of slate which have never yet been broken, and which will remunerate the proprietors over 40 per cent. for working. The North Delabole has for many years paid the proprietors over 30 per cent. profit; and the Trewarmett Delabole, in the hands of its present owner, and under the present system of management, cannot fail to return ample profits. All these quarries ship their yield of slate without difficulty at Port Gaveron or Boscawen, the freights from which ports to London are less than from Bangor—a pretty good criterion of what shipowners think of the dangers of the coast.

I conclude by assuring you that I have no interest whatever in this controversy between Welsh and Cornish slate; only in justice to one of Nature's gifts, as discovered and abounding in the north or Cornwall, are these lines penned, and the facts herein stated submitted to your impartiality to be made public.

A MINERALOGIST.

## LEGITIMATE MINING IN CARDIGANSHIRE.

SIR,—In my last letter I did not say one word about Mr. Warington Smyth, I did not even allude to him in any way, and yet Mr. Matthew Francis, with all that fairness and honesty he has shown throughout this controversy, asserts that I "keep harping on [this] one string—Mr. Smyth said so and so in his book." I ask your readers, Sir, if this system of misrepresentation is honest? if it should be tolerated in a discussion on questions of scientific and practical importance? How is it that this dispute has dwindled into the solitary question of trap? The answer is simple—Mr. Francis has failed to meet the charge I have brought against him. He has not ventured to deny that his report of the Havan Mines is imperfect, vague, inaccurate, and "unscientific." He has not ventured to support the groundless accusation he hurled at "C. T." He has not ventured to prove the fearless assertion he made, that the share lists of all the mines he is connected with are filled. But, firm in the grip of his own trap, he strives to divert attention from the main points at issue to one which is comparatively of little moment. I take it that there is no defence, and judgment then goes by default. All I have to do, under these circumstances, is to repeat the charges I deliberately made against Mr. Matthew Francis, and which I have proved by conclusive evidence. I again challenge him to try the issues before the bar of public opinion. I have, however, one word to say about this wonderful trap. I maintain that Mr. Francis does not know what trap really is, because he uses the word as synonymous with porphyry, hornblende, and other igneous rocks; and because he describes it as hard crystalline rock. Now, it is well known that trap is a generic term, and that it includes porphyry, greenstone, &c. But I do not lay so much stress upon that as upon porphyry being described simply as a crystalline rock of great hardness. The two statements, taken together, leave no doubt on my mind that Mr. Francis, notwithstanding his very long experience, has a confused notion of the characteristics of porphyry. But, further, I maintain that there is no igneous (using the word in its widest sense) rock whatever in the Cardiganshire mining district. I make this statement on the authority of De la Beche, Ramsay, Murchison, Sedgwick, and others, including Mr. Warington Smyth. These eminent geologists have gone through the district with the utmost care, and their opinion is surely of some weight. And, I may mention here that the quotations from the "Geological Report of Cornwall and Devon," which Mr. Francis has disjointed and jumbled together, have no bearing at all on the question. It is utterly impossible to draw a true analogy between Cornwall and Cardiganshire, the two districts being widely different in many important respects. But Mr. Francis rests his knowledge of Cardiganshire, of mining, of geology, and of mineralogy on his long experience; and he argues that because he has this experience he must know all about the rocks in Cardiganshire, and therefore, his opinion is of more value than the opinions of De la Beche, Ramsay, Murchison, and Sedgwick, whose experience is not to compare with that of Mr. Francis. Mr. Francis can boast of, nor can I compare with that of any ignorant miner, whose knowledge is confined to the headings in which he has worked, it may be, for fifty or sixty years. So much for experience. Let us, however, see what Mr. Francis really knows about the rocks in Cardiganshire—I mean scientifically. That is a fair way of testing his pretensions, and of gauging his authority upon trap.

I have before me a heap of reports written by Mr. Matthew Francis on Welsh mines. I shall make no selection from this heap, but I take the first that comes to hand, and as chance directs, it appears, I have fallen upon the prospectus of the North Hafod Silver-Lead Mines, in which there is a report by Mr. Matthew Francis, dated April 16, 1861. And it is rich indeed! Like the Havan, Rio de Janeiro, and lots beside, it is imperfect, vague, inaccurate, and "unscientific." But I must keep to the one point before me, and see if there is anything in it that proves the shallowness of Mr. Francis's geological knowledge. After speaking of the lode, and pointing out (myself, of course) some fanciful connection it has with other lodes in the district, which have yielded fabulous fortunes, he says, "Geologically speaking, the veins are embedded in the most ancient Cambrian series of measures." Oh! oh! Mr. Francis, "Cambrian series of measures!" Pray, where did you get your geology? At the "Lilliput University?" Or, did you dig it from the profoundly learned and scientific letters of Mr. Nicholas Enner and Mr. Alison? Or, is it the grand result of your long experience at the pick, and in your fiery and hasty laboratory at Goginan? "The most ancient of the slates," called the Cambrian series of measures," Mr. Matthew Francis! and yet you pretend to know better than Murchison and Sedgwick, because you have had 36 or 40 (it is not quite clear) years' experience in mining. Thrusting aside, however, for a moment the despicable construction of the sentence, it is evident that Mr. Francis knows nothing whatever of the geological formation in which he has worked himself old and crabbled, for there are, in truth, no Cambrian rocks in Cardiganshire.

I must here explain that, many years ago, there was for a short time only, some confusion in the chronological nomenclature of the rocks, arising from the confusion in the chronological nomenclature of Sedgwick in North Wales, and of Murchison in South Wales; but that confusion could not by any possibility lead to the gross mistake of Mr. Matthew Francis in describing the strata of the Hafod Mines. The recognised classification runs, beginning at the bottom,—Pre-Cambrian, Cambrian, Lower (or Cambro-) Silurian, and Upper (or True) Silurian. The Pre-Cambrian are highly metamorphosed rocks, lying beneath the Cambrian. There are none of these rocks in Wales. They have been observed in Scotland by Murchison, Ramsay, and Harkness; in Canada, by Logan; and in some other parts of the world. The Cambrian grits and slates are highly developed in North Wales, at Caernarvon, Delgelly, the West of Snowdon, and the Llanberis, &c. In South Wales, the Lower (or Cambro-) Silurian are found in Merionethshire and Carnarvonshire, in North Wales, and in Carmarthenshire, in South Wales. They include the Lingula flags, Llandovery flags, Bala beds, or Cardaroc rocks, and Lower Llandovery rocks. The Upper (or True) Silurian are the Upper Llandovery, or May Hill, and the Wenlock and Ludlow groups. This short explanation renders the sequence of rocks plain. Now, so far as I understand Mr. Francis's clumsy sentence, he says the rocks at Hafod, or the Devil's Bridge, are Longmynd, or, to use his own words, "the most ancient of the slates," or "Cambrian rocks," a mistake which no geologist could ever make, for they are not Longmynd, nor Lingula, nor Llandovery, nor Bala, nor the Cardaroc rocks, nor the Lower (or Cambro-) Silurian, nor the Upper (or True) Silurian. In "Siluria," in "Sedgwick and McCoy's Synopsis," and in other standard works, in the fossils found at the Devil's Bridge, not far from the mines, *Atrypa crassa* occurs, which must satisfy Mr. Francis—would be mine, would be chemist, would be geologist, would be mineralogist—that these rocks, which in 1861 he ignorantly described as Longmynd, or Cambrian, belong to the Lower Llandovery group. This might appear of no moment to those who have not considered metallic lodes in relation to the age of the rocks which they traverse, but it would be easy for me to show that the direction and character of productive lodes are influenced by the age of the rocks in which they are found. But my argument is complete, as it is evident from what I have stated that Mr. Matthew Francis is "not up" in the geology of Cardiganshire; and, by inference, that he is "not up" in trap.

I could multiply these facts, proving beyond doubt that Mr. Francis cannot, for want of suitable knowledge, give a scientific report of a mine. If he wishes, I will show, from his own reports, now before me, that in every instance in which he attempts to describe the geological or mineralogical character of lead or copper mines, he perpetrates gross and unparadiseable scientific blunders. But I would rather not, because I do not write to give personal offence to Mr. M. Francis, nor to damage his reputation, nor to struggle with him for victory. All I want is to correct the mining public, and to answer my purpose, which is one with the public, as I have no personal or direct interest in mining. Nevertheless, I am intimately concerned in all the material resources of Wales, not as a speculator, nor as an adventurer, but as a Welshman, who has a large stake in the country of his birth, which he loves with all the ardour of an enthusiastic Cymro.—Carmarthen, Aug. 5.

C. T.

## DIVIDENDS PAID ON CALLS IN ARREAR.

SIR,—In a recent Journal your correspondent, "Clericus," in a letter bearing the above title, very satisfactorily shows that a defaulter really gets what is equivalent to a dividend upon the amount of his arrears. This dividend he estimates at 25 per cent., and I am inclined to think that he is below rather than above the mark; yet I do not anticipate any immediate reform in the mode of collecting, because there are certain parties who have a direct and material interest in keeping the mine in debt, so that they would not be the first to move in the matter. The profits accruing directly and indirectly from their dealings with mines in debt is never less than 50 or 60 per cent., and not unfrequently 100 per cent. per annum, or even more upon their investment, so that they can well afford to let the 25 per cent. difference between the paying and defaulting shareholders exist; indeed, they well know that if by any means the prompt payment of all calls could be secured these enormous percentages would go into the adventurers' pockets instead of their own. There was a case referred to in your last week's Journal in which one gentleman is stated as being lord, merchant, and banker to the mine, and taking payment from the adventurers in each of these capacities. Now, would he advocate the ready money system? Certainly not, except with respect to the payment of lords' dues, which must be paid promptly to induce him to accommodate (?) the adventurers in his other capacities of merchant and banker. By way of example, I will take the single item of calls, and assume that the ordinary market price averages 16s. per ton, and that the mine consumes 100 tons every two months. Now, if the adventurers be in a position to pay ready money for these calls they would buy them at 16s. per ton, and get at least 2½ per cent. off as discount for cash; consequently, the calls will cost 78s. for two months, or 468s. for the twelve months' supply. How different would be the cost of these same calls obtained through a lenient merchant-adventurer by a mine continually in debt, as most mines are, through the shortcomings of defaulters. The lenient merchant would charge 17s. 6d. per ton, to cover his risk, though he well knows that the risk is none (the adventurers all being respectable men, otherwise he would take good care to get their shares forfeited, and re-sell to those who could pay), and that, so far as he is concerned, it is simply a question of interest and discount, a subject with which he is fully conversant. As I also know something of these very useful rules of arithmetic, I will endeavour to show what these 600 tons of calls, worth 16s. per ton, cost the adventurers. The first order of 100 tons must be delivered on Jan. 1, terms "cash at the end of

month," and the invoice would be for 100 tons at 17s. 6d.—351. At the end of the month the merchant-adventurer agrees, as a favour, to take the committee's acceptance at two months, on their adding 5 per cent. to the invoice, and thus obtains an acceptance for 361. 10s. for the same calls as would have been purchased for ready money for 351. As it is extremely difficult to get out of this credit system when it is once commenced (the mine usually becomes more and more involved), this process of non-payment, bill-accepting, and interest goes on from month to month, and from year to year; in fact, until the mine fortunately cuts rich, or is abandoned. In the meantime, the 100 tons of calls per two months must be had, and consequently, for the year's supply of 600 tons the adventurers pay 361. 10s., instead of 468s., the difference being equal to a direct and positive loss to the adventurers of 90 per cent. per annum upon the fair market price of the calls, or, to explain the position more popularly, the adventurers pay each year for nine weeks' supply of coal more than they receive. But, whilst the loss to the adventurers is a rather less than 20 per cent. per annum, the gain to the merchant exceeds 65 per cent. per annum, for he receives 90s. in a single year upon an outlay—upon a total capital, in fact—of 1461., even assuming the ready-money trader to make but 1s. per ton profit. If the ready-money trader can buy so as to realise more than 1s. per ton when he sells at 16s. per ton, the merchant-adventurer's profits will be just so much increased beyond the 65 per cent. per annum. The reason of this is obvious, for it will be seen that, even allowing for the delays above mentioned, the first 100 tons is paid for before the third 100 tons is deliverable, so that the total amount which the merchant-adventurer has at stake is the amount of the cost price of 200 tons. Assuming him to buy at 14s. 7d. per ton, the total capital required would be 1467., upon which he gets an income equal to that obtainable from the investment of 3600s. in Consols at 3 per cent. Would the merchant-adventurer be likely to desire the ready-money system to become general? I think not. It must be a dissatisfied mortal indeed that would not be content with 65 per cent. interest upon his outlay, yet mine managers well know that I have by no means over-stated the excess charged for credit, and that this excess is smaller in the case of calls than in the case of many other materials required on a mine. There are some articles supplied where such exorbitant charges are made that the profits of the supplying merchant will be considerably over cent. per cent.—profits which often give inducement to the merchant-adventurer to advocate leniency towards defaulters. Would adventurers but consider the evil result of the credit system to mining, the heavy arrears of call now general would not be tolerated; mining would be looked upon by capitalists, and justly so, as it would be far more profitable.

I have said calls are less heavily overcharged than other materials, and yet the adventurer loses 20 per cent. Assuming the 468s. to be the ready-money value of the whole two months' cost of a mine and the amount paid upon credit 561., what will be the relative position in case of a mine selling 250l. worth of ore per month, and in 512 shares. Just this:—On the credit system a 2s. 6d. call will be necessary at every two-monthly meeting to keep the mine going. On the ready-money system there would be 16s. per month profit, which, although I admit, small, would render calls unnecessary, and enable a 2s. 6d. dividend to be declared every third meeting. Were the adventurers to borrow money at seven per cent. per month, and pay ready money at the mine, the mine would still pay cost, and the periodical 2s. 6d. calls would be unnecessary. My assertion is this:—All mines spending 250l. per month, and making only 16s. per 512th share annually, might go on without if the money were bona fide borrowed, and ready money paid. Your able correspondent, "A Cautious Man," has pointed out and done much to remedy many abuses. Let him now turn his attention to the question of the arrears of calls, and point out to his admirers that, if by any means the committee can be put in possession of the full amount of each call the day after it is made, they can afford to give 7 per cent. per month for the money, and still reduce the amount of calls necessary to the extent of 2s. 6d. per share every two months. This is a duty which "Cautious Man" is thoroughly competent to undertake, and one which is calculated even to increase his reputation amongst capitalists.

G. R. C.

## EAST WHEAL GRENVILLE.

SIR,—I think many of your readers must have well cudgelled their brains to discover why the shares in East Wheal Grenville lately dropped from 4l. to 2l. 15s. Of all the mad freaks of the Mining Market, that was the maddest I know of. Many a time has the question been put to me—"Whatever is the reason East Grenville is going down so?" I have heard some give two reasons for the decline in price; one of which was, that speculators had overbought themselves, and could not pay for their shares, their losses in East Caradon having taken away all their ready money; the other was, that a new engine must be had, and that some fabulous amount would be required, in the shape of calls, to pay for it. No doubt other reasons were given, but this I know, that the state of the mine did not warrant the fall in price; also, that the improvements which have taken place in East Grenville ought to have sent the price considerably beyond the 4l. that the shares were selling at.

I believe the sole reason of the fall in East Wheal Grenville, as well as in other first-class progressive mines, was owing entirely to the absence of business on the part of the public, for it must be evident to everyone that the jobs cannot be always buying, unless the public come in and buy also from them. The hands of the jobs are now full, and the pockets of many of them empty; thus prices in many shares are merely nominal, and speculators who will or must sell at such times, must take whatever they can get.

I have said that the public is not now buying; yes, and I will say more—that unless a certain class of brokers turn over a new leaf, and learn to transact their business in an honourable manner, the public will quit the Mining Market altogether, as a great many of them have already done.

Mining, properly conducted, is as fair and legitimate a method of getting money as any other business; but what chance has a speculator so long as such doings as have lately been exposed continue to be practised? Depend upon it, that for every single individual who is thus victimised, we may reckon that at least a score will be prevented from speculating in mines; and well they may be whilst such trickery exists. But this is a digression; now then to my subject. East Wheal Grenville meeting has lately taken place, and with some forfeited shares, which were ordered to be sold by auction, for the benefit of the company, a one shilling call was found to be amply sufficient to pay off all the debts due.

When East Wheal Grenville shares were selling at 30s. to 35s., I called the attention of the public to the merits of that mine, and I was happy to see an immediate advance take place, which, it is well known, was warranted by the splendid prospects of the mine. I will now perform the same kind of office for the adventurers in East Wheal Grenville: and as I am one of the committee of management, I have taken care to ascertain that all my statements respecting that mine are facts.

As a report has been circulated that a new engine must be immediately purchased, I tell my readers that such will not be required for eight or nine months; still it must be had, as the one now at work will not then be powerful enough for the mine. Before it is wanted several secondhand ones, very little the worse for wear, will offer, and as soon as a bargain turns up, no doubt, we shall purchase it, but there is not the least hurry necessary. Now, what do my readers suppose a secondhand engine, in first-rate condition, and fit for all the purposes of the mine, will cost? Why just 800l., or 900l., and as the old one will fetch about 300l., a 2s. call will be all that will be required to pay for it. Therefore, whoever buys shares in East Wheal Grenville to keep, let him reckon 2s. a share in addition to the cost for the engine; for this it will amount to, and no more. So much for the enormous expense required for the engine—"A tempest in a teapot."

At present the shaft is not sinking as the 65 ft. level must be taken a little further, both at west and east, to make place, &c., before the men can proceed with it. The sinking will, however, be resumed very shortly, and if the lode should continue in depth of the same value it now is, saying nothing of the great probability of its improving, what a splendid property will not East Wheal Grenville become? As many of my readers may not have noticed the richness of this lode, I may as well state that the shaft is worth 5 tons of good ore per fathom for its length, and yet the depth is only 65 fathoms. The various levels are worth 8 tons to the fathom, in addition to this; thus the shaft ends, or levels, are worth 13 tons of copper ore to the fathom, besides tin.

I am now about to state an important fact, which may have escaped the notice of some, and which does not, if it has not, then, the fact has not had its due importance attached to it—East Wheal Grenville has four distinct lodes, and every one of them of value—the MAIN LODE, the CAUTER LODE, the NEW LODE, and the MIDDLE LODE, and still other lodes are believed to be in the set.

Well may the manager say, "The prospects of the mine were never so favourable as at present;" and well may one of the most experienced agents in Cornwall have lately expressed his surprise that the shares were quoted at such a low price, knowing, as he does, that no mine in Cornwall is better situated, that the district is one of the best in Cornwall, that mines with no better prospects, if so good, are selling at more than double the price, that the mine is very richly paying expenses, and that the management of it, and the able direction of Capt. George Odgers, is all that can be desired.

With all these advantages, the shares are quoted at 3d. to 3½.

If any speculator doubts the truth of what I have written, let him send an independent agent to inspect the mine, and he will soon be convinced that East Wheal Grenville is a first-rate speculation. For my own part, I am perfectly satisfied with the manager's reports, well knowing from former experience that he is always rather under the mark than above it in his valuations.

As a young progressive mine I consider East Wheal Grenville to be one of the cheapest and most promising in the market. This is the time to buy the shares, as in other months the mining market will be all but again. Speculators should always select such dull times as these as to buy, not to sell.

Since the above was written I have seen this week's report. The 65 cent is worth 2½ to 3 tons per fathom, and the other parts of the mine looking just the same as they did at the time of the meeting. They will recommence sinking the shaft the latter end of next week.

At West Trevelyan the lode this week is not looking so well in the shaft, but other parts of the mine are just the same. An improvement is expected in the shaft at the next taking down of the lode, which may possibly then be more valuable than it has ever been. We must not expect very rich lodes in a mine whilst selling at 3s. or 10s. a share.—Addison-terrace, Kensington, Aug. 12.

A CAUTIOUS MAN.

## NEW WHEAL SETON—NANGILES MINE.

SIR,—In offering some remarks on these mines, forming two of the most important progressive mines in Cornwall, it will, I think, show that some mines are unduly valued, from causes quite unaccountable to the most thoughtful observer.

NEW WHEAL SETON is divided into 400 shares, and selling at 40,000l. for the mine. It is worked by a 40-in. engine, and adjoins West Seton, on the faith of which, it is with strong indications in sinking the shaft below the 80 ft. level, it is difficult to buy a share at the above quotation; in fact, if they had a lode worth, say, 40l. per fathom in sinking the shaft, these shares would readily realise 200l. per share, or 80,000l. for the mine. No one can question the reality of this statement. The management is highly commendable, and the purser's name (Mr. B. Matthews) is a passport of safety in the estimation of every Cornish adventurer. The proprietors are mostly holders of West Seton, and may, therefore, be considered first-class.

NANGILES, which is down, I think, to the 90 fathom level, adjoins Clifford and Great Consols. These mines were the richest for copper in the county, and yielded the profits, Clifford, but for heavy water charges, would be highly profitable even now. Judging from the West Briton of last week, the proximity is so close that the 80-in. engine at Nangiles has very little to do. This mine is in 1000 shares, and about a month since were only saleable at 10l., although the cost is stated to be 15l.; but the most remarkable feature is the fact that, notwithstanding the discovery of a rich lode in sinking Nangiles shaft, worth 40l. per f., these shares are only quoted 20l. per share.

The purser of Nangiles is also the purser of New Wheal Seton, and the management is equally unexceptionable. The West Briton, also, refers to a few of the proprietors—Messrs. Williams, Capt. Bickford, Dr. Smith, R. Lanyon, R. Burgess, R. Michael, Whitford, &c. and others, as holding a majority. I do not admit to most of these it would make little difference whether the shares were quoted at 20l. or 40l.; the quotation does not affect the legitimate value, but it shows the caprice which not unfrequently for a time marks mines of equal worth. I do not consider New Wheal Seton over-estimated in its prospective value; and even if I did, it would not influence the views of the shareholders; and I have, therefore, chosen this mine by way of contrast, in the certainty that my observations can do no harm.

Your insertion of the above may induce a few remarks from others on prospective



value—an element not much estimated in some other mines equally deserving in point of proximity to riches.—*Jamaica Coffee-house.*

## MR. J. R. HARRIS, AND "LES GRANDES MINES CONSOLIDÉES DE VILLEMAGNE."

SIR,—Some of your correspondents seem desirous of knowing why Mr. (or Captain) J. R. Harris, of Blackheath, does not continue a director of the *Eliz Mary* Colliery Company, and why he has not explained to the public the reason of his severance from that enterprise. I, on the contrary, should be glad to learn why he has become a director of a company denominated "Les Grandes Mines Consolidées de Villemagne," seeing that he expresses himself desirous of being clear and above-board with the shareholders and the public, and repudiating all that is ambiguous. In the first place, it is remarkable that a company, whose prospectus is in English, and its whole constitution British, should have its title in French; but, probably, it is a little bit of conceit on the part of the promoters, although it savours, to my mind, of a species of "clap-trapism," which surely ought to be abhorred by such a consistent gentleman as Mr. J. R. Harris, of Blackheath.

No promotion fees are to be paid by this company, but "the vendors to have paid-up shares in equal proportion to the number issued to the general body of shareholders." The capital is 21,000 shares, of 4s. each, or 84,000l. What does this mean? If the whole 21,000 shares be taken by the public, are the vendors to have 21,000 shares, and so constitute a share capital of 84,000l., in shares of 4s. each, or the stated capital of 84,000l. to be divided between the vendors and the public? How can Mr. J. R. Harris remain a director of a project where so much apparent mystification exists? and if his practice be equal to his professions, he ought unquestionably to give some explanation of this extraordinary provision in the prospectus, especially where credit is taken for the interests of the shareholders in any way permitted. It would be interesting to know who are the vendors of these mines, and whether Mr. J. R. Harris is one of them? Moreover, is the company, which is declared to be "limited," registered? These are points which Mr. J. R. Harris can or will explain, and if he be really anxious of being considered a consistent man he will do so.

## GAS-LIGHTING IN COUNTRY MANSIONS.

SIR,—I have just read an elaborate report by your old correspondent, Mr. George Bower, of St. Neot's, upon Petroleum Gas, in which he refers to his Fitzmaurice report as something differing widely from Malam's report, invented forty years previously, though I must say that the sole difference that I can discover is that the one was applied to the distillation of coal, and the other to the distillation of cheap oils, not then discovered. Mr. Bower states that it has been the common practice in making gas from oil to fill retorts with coke, broken bricks, or any material which will give surface, and the oil has been dropped or run into them, or made to traverse through them; but this seems to be a very effective way of absorbing the carbon, to which all gas owes its luminiferous property. The result of a great number of experiments has made me determine that a high heat with a large surface is the very best plan that can be adopted for making gas from oil; but that in order to get the best results, a moderate heat—dull cherry red by daylight—and the double force of retort without anything in it, give the best results; not for volume of gas, but for quantity of light; in other words, there is more light from 80 cubic feet of gas produced in accordance with the latter plan from the gallon of oil, than from 160 feet produced according to the former mode from the same quantity. The test of the apparatus is the same as for ordinary coal, excepting that no purifier is required; but the condenser has double the surface of that for coal, on account of the rapidity with which the gas is evolved. A meter to measure the quantity of gas produced, and a gas-holder, complete the apparatus.

I quite agree that oil gas has the advantage that it requires no purification, owing to its being absolutely free from impurities, but I deny that Mr. Bower's Fitzmaurice report has any advantage over Malam's; and I deny, also, that the private consoling can obtain petroleum oil, at 80s. per ton, as he says. The cost would be more nearly 100s. per ton, or, at least, 60s. per ton, for the oil, and the cost of the apparatus, instead of 15s., as Mr. Bower estimates. He says the daily cost of petroleum oil gas, when made to supply 100 lights burning for six hours, each light being equal to eight candles, is as follows:—

15 gallons of oil, at 1s. ....	£0 15 0
Coke to heat the retorts, 3 cwt., at 1s. per cwt. ....	0 3 0
Labour and part of a lad or man's time ....	0 1 6
Wear and tear ....	0 0 9
Interest on capital ....	0 0 0
Fund to maintain plant in perpetuity ....	0 0 6

Net cost of 1200 cubic feet .... £1 1 1

This 1s. 1d. he estimates to be five times the cost of coal gas made on the same scale. This is not exactly correct. The gas I make in one of Mr. Bower's retorts from coal costs me nearly 15s. per 1000 cubic feet; and yet I unhesitatingly say that Mr. Bower's apparatus is the best I have ever used. Coal gas cannot be made by the private consumer under 12s. per 1000 cubic feet, under favourable circumstances, or if it can I shall be glad to learn from Mr. Bower where the economic process is to be seen—except in his own factory or workshop by his own master.

If Mr. Bower be correct in stating that "1 foot of oil gas will give the light of 3 feet of ordinary coal gas, and though gas, under very high pressure, loses some of its luminous qualities, yet it may be condensed at 15 atmospheres, and thus become perfectly portable; so that beginning with a gas of three or four times the illuminating power of common coal gas, and condensing a given volume into a fifth of its bulk, there is in this fact alone a large field for the use of oil gas for the lighting of railways, ships, private carriages, and country houses, where it may not be feasible or policy to erect small gasworks for the supply of gas at ordinary pressures," gas would be more generally used. But gas manufacture is not an occupation for ordinary domestic servants; and although you may get gas at 5s. per 1000 cubic feet for a single hour, you will find that it costs you 15s. per 1000 to burn, taking a month's supply. I agree with Mr. Bower, that as "the illuminating qualities of 1200 cubic feet of oil gas are equal to about 3500 of ordinary coal gas, the oil does not compare very unfavourably, when everything is taken into consideration, so that if the gas be required only for lighting purposes, and not for cooking or heating (for which it is totally inapplicable), then there are very many who will doubtless prefer paying a high price for oil gas, in order to get a light which is absolutely pure, and which, though not nearly so cheap as ordinary coal gas, is nevertheless infinitely cheaper than oil, tallow, or wax, as ordinarily burnt, and without their inconveniences." And I simply differ from him in the price at which the private consumer can burn home-made coal gas.

I shall try home-made petroleum gas, as Mr. Bower speaks so favourably of it; but I shall use a retort either of Malam's form or a simple U-shaped tube, instead of a Fitzmaurice, which I consider costly and unnecessary. On some future occasion I will let you know the cost at which the oil gas is obtainable.

A. YEOMAN.

**DISCOVERY OF GOLD IN SCOTLAND.**—Up among the Hartfell Hills, near Moffat, and about Dobbs' Linn and Meggart Water, several small "finds" of gold have been made recently; one nugget, weighing about 6 grs., has been publicly exhibited.

**BRITISH COLUMBIA.**—A letter from Victoria (June 22) says—"A class of great interest and of the highest importance to the country is now beginning to appear on the scene from time to time—gentlemen of practical mining knowledge, mining agents representing English capitalists, as well as working miners from Cornwall and Wales, have lately arrived, and are travelling over this island and British Columbia in search of ores of gold, silver, and copper, and one of these has made arrangements for visiting a copper mine in Vancouver Island. The same societies of England have also sent out agents on scientific missions to examine both countries. They will find here a more and more interesting field for the pursuits of the natural sciences, and their reports will dispel much of the misrepresentation spread abroad by disappointed adventurers, who saw everything through jaundiced eyes."

**CANADIAN GOLD DIGGINGS.**—It will scarcely be credited that we have a California almost at our doors; yet it is nevertheless a fact that in the Seigneurie of Yandreville, and on the tributaries of the River Chaudière, about 60 miles from Quebec, gold is found. One nugget of pure gold, worth £18 per oz., and weighing 1½ lb., was picked up in the bed of one of these streams, which at this season of the year is almost dry. Another nugget, weighing 9 ozs., and also pure, from the same region, was disposed of in town this week. It is said that about \$20,000 worth of gold has been gathered there this season. One man, residing near the locality, has in his possession a gallon measure full of the precious metal, in pieces of all sizes. Since the golden news has leaked out, people have been flocking to the diggings in crowds.—*Quebec Mercury.*

**THE ONLY EMERALD MINES IN THE WORLD.**—(By a South African Traveller.)—I was on my way from Bogota to the coast of the Caribbean Sea, to make a visit to the United States, when I determined to deviate somewhat from the route which I had laid out for myself, to make a visit at the house of a friend, who was interested in the Emerald Mines of Muzo. It is not generally known, I believe, that the place which I was approaching is the only spot in the known world which yields the true emerald. There are other green stones possessing a considerable degree of clearness and transparency, with sufficient hardness and fineness of grain to admit of a good polish; and some of these bear the name of emeralds, especially such as come from the gold mines of the Ural Mountains in Russia. But it is sufficient only to place such by the side of one from Muzo, to discover their inferiority, which is fully confirmed by analysis. Among the wild, rocky scenes through which I had so long been passing, I stopped one day, having arrived at the house of my friend. And a truly hospitable reception did I meet with. After sufficient rest and refreshment, we proceeded to the emerald mines. As we approached, the face of nature showed evidence of a strange and tremendous convulsion at some long-past period of the world. Two immense rocks, opposite each other, with a deep and gloomy gorge between them, through which flows a torrent, have every appearance of having been once united. Now they stand entirely separate, and both sides display corresponding strata of different characters, which seem as if ready to be again united, if they could be brought together. Veins of light colour, composed of lime-silicate, were seen here and there, which form the matrix or bed of the emerald; and only a little experience is necessary to enable an observer to discover the precious stones. I believe it is a slight tinge of green, which shows the part of the vein in which they are deposited. Caution and skill are then required to uncover and cut out the emeralds, without destroying or injuring them. Here and there I observed spots of the most brilliant grass-green, dispersed in the veins, and eagerly enquired whether they could have escaped the eyes of the miners. "O, no," replied my friend, "we know them well; they are good for nothing." But, said I, "they have all the colour and brightness of the true emerald." True, returned he, "but they are ruined by flaws, and are unfit for cutting." I then examined them more closely, but could not convince myself that they were not stones of great value. "You admire them," remarked my friend, "you shall have as many such as you choose to take with you. I will give you some of real value also; and when you reach the United States, if you do not understand the difference, the lapidaries there will tell you." This I afterwards found to be the case. I had always admired emeralds; but I think that the appearance of those which I saw in their native bed, seemed to me superior in beauty to any I had seen and polished by art. The emerald mines of Muzo are the property of the Republic of New Granada, and are rented for a term of years to persons who work them. Sixteen thousand dollars is the sum which is now paid for them annually. It is believed that they have been profitable to the present lessee, but, as the number and value of the gems taken out are unknown to the public, the question is one of mere conjecture. Under the Spanish Government great quantities of emeralds were taken from the mines of Muzo; but so carefully were they guarded, that the precious stones derived from them were generally believed to come from Peru, where, in fact, there are no emeralds. To prevent a fall in prices, the mines were for a time closed. After the revolution, Bolívar gave the rent of them to Sanor J. T. Paris, a distinguished patriot, who enriched himself by working them, and left a large fortune to his son. On the expiration of the term of the contract another was made with a German house in Bogota.

**THAMES TUNNEL COMPANY.**—Receipts for the week ending August 8, 1863, £4,100; number of passengers, 13,339.

## Mineral Correspondence.

### BRITISH MINES.

**ALL-TY-CRIB.**—J. Hughes, Aug. 10: In the deep adit, driving west by four men, towards the junction of the south caunter, the lode is looking promising, with some water coming from the west; the lode is composed of clay-slate, carbonaceous lime spar, and stones of lead occasionally. I hope soon to reach the junction of the lode, where I expect to have a regular course of ore, with great height of backs to work for years. The tributaries on the back of the hill are at work as usual; they have 6 tons cut or thereabouts; in a few weeks I expect they will have 10, that we may have a small sample to send off.

**BAGTOR.**—W. Hosking, Aug. 13: The sinking of the western engine-shaft is going on satisfactorily, and is set to nine men, at 107. 10s. per fm.; the lode here, though not yet rich, is certainly improving as we gain depth, and is now producing more tin than when last reported on. The 16 adit, driving west from Proper engine-shaft, is also improved; driving in very cheap ground, being set to four men, at 31. per fm.; the lode here is about 2 ft. wide, and producing some very rich work for the stamps.

**BALDWIN (Isle of Man).**—M. Grosse, Aug. 1: I repeated my inspection of the Baldwin Mine on Saturday last. The bottom cross-cut, driving south towards No. 3 lode, is come into a stiff blue clay schist, which has much impeded the progress of this driving, but trust this will soon alter for the better; the character of the ground is most congenial for ore, and such as might be expected to produce large quantities, but, of course, this cannot be looked forward to until No. 3 lode is intersected. In the north cross-cut the ground is of a similar character, but more mixed up, with branches of spar, by no means a bad indication; it also issues a strong feed of mineralised water. In a line, and opposite the old arch level, a drain has lately been cut for the purpose of preventing water from percolating into the mine; in this operation the back of No. 1 lode is to be seen, it consists of beautiful mineralised flookan, mixed with mudiic, sugar-spar, and spots of lead ore; in fact, a more promising lode cannot possibly be found so near to the surface, and I consider this a most important point to drive at, and for this purpose I would recommend driving the north cross-cut with all possible speed.

**BEDFORD CONSOLS.**—J. Mitchell, Aug. 13: In the middle adit level east, on the north lode, we have intersected another small cross-course, underlying east, and running obliquely with the lode, which is in a disordered state for the time, but I hope to see it improve as we get off from the influence of the cross-course.

**BEDFORD UNITED.**—J. Phillips, Aug. 11: The lode in the 130 east and west is unproductive. The stopes in this level were yielding 4 tons per fm. The lode in the 116 west is 18 in. wide, producing stones of ore. Rundle's and Lang's stopes, in this level, are yielding 4½ and 4 tons per fm. The lode in the 103 west is 18 in. wide, producing stones of ore. The stopes in this level are worth 3 tons per fm. There is no alteration in the 90 west. The stopes in this level are worth 2 tons per fm. The stopes in the 47 and 35 east are worth 2 tons per fm.

**BOSCAWEN.**—T. Trelease, R. Giles, Aug. 11: The lode in Hunter's shaft, sinking below the 50, is 1 ft. wide, producing good stones of copper ore, of a more promising character. The lode in the 70, driving west of said shaft, is 1 ft. wide, yielding a little copper ore, but not of much value; the lode in this level, west of Kiteley's shaft, is 3 feet wide, containing stones of ore. The lode in the 60, west of Hunter's shaft, is at present small and poor. The lode in No. 2 mine, sinking below the 50, is 18 in. wide, worth 18s. per fm. Sampson's lode in the 30, east of John's shaft, is 20 in. wide, saving work, of a kindly appearance. No lode yet intersected in the cross-cut south at this level. No other change to notice in the mine since last report.

**BOTTLE HILL.**—J. Eddy, Aug. 11: The 12, east of shaft, on south lode, has been driven about 3 fms.; the lode in the present road is composed of spar, capel, and tin, worth for the latter about 5s. per fm., and likely to improve. The 12 west has been driven about 2 fms.; the ground is still hard and the lode disordered, and for the present poor for tin. As I advised you last week, I put a pair of men to sink a winze on the course of the lode in bottom of the cross-cut adit level east, and I am glad to say the lode is still holding good. We have sunk about 6 ft.; the lode is looking very promising, worth from 12s. to 18s. per fm. for copper and tin. The stopes on the main and Robert's lode are about the same value. Our parcel of tin sold on Saturday last made 68s. 5s. per ton.

**BRONFLOYD.**—J. Lester, Aug. 12: The lode in the 53, west of shaft, is better developed, containing a small mixture of lead ore. The stopes in back of the 40 continue much the same, and will expect to yield 20 to 30 cwt. per fm. The piece of ground mentioned in my last as being likely to form a communication between the 40 and the stopes above it doing so; but in doing it I regret to say that one of the men met with a serious accident, through incautiously going into the level during the time that a hole was being blasted in the rise. I have set a winze to sink below the 40, but am much afraid that unless the 53 is more advanced the water will be too troublesome to make much progress; the portion of the lode at present opened by it will yield 26 to 30 cwt. per fm. No alteration in any other portion of the mine. The 50 tons of ore sampled last week will, in a few days, be at the stores at Carnarvon ready for shipment.

**REYNOLDS.**—F. E. There is no change in the 90 east, which is in a very fine strong lode. We sampled 50 tons to-day. The engine at Round Hill is a good one, the foundation of cylinder loading has given way, and the engine has worked out of gear, consequently the cylinder is not so good. The crusher is a very poor one, but taking it altogether it is worth 400l. The 75 west is held to the old workings.

**RYNANT.**—J. Roach, Aug. 13: We are getting on sinking the engine-shaft just as I expected. The water has increased, therefore we put a lift into it this morning which we shall sink with in future. From all I have now to judge from, I believe that we shall see the lode at the 20 fm. level, 27 fms. from surface, at the time I named in my report for the general meeting. I have nothing else to remark on this week.

**BULLER AND BASSET UNITED.**—W. Pascoe, S. S. Rice, Aug. 11: We have but little change in the prospects of the mine to notice since our report of the 5th inst. In the 80, east of engine-shaft, we have cut through the lode; it is 6 feet wide, showing good spots of strong yellow copper ore, with easier ground for progress. In the 60, west of engine-shaft, the lode maintains its size, without any alteration in character. In the 80, on the south lode, the men have had to clear their stuff, consequently there has not been much done in these ends. East the lode is made up of mudiic, prair, chlorite, and occasional spots of grey copper ore. In the west end the lode is still disordered by branches of the cross-course, and until the west end is free from the influence of the cross-course, we do not expect any very important change in the character of the lode.

**CAMBORNE CONSOLS.**—W. Roberts, Aug. 11: In the 60 west the lode is 1 ft. wide, producing stones of ore. In the 50 east no lode has been taken down for the last week. In the rise in back of the 33, on the north lode, the lode is 1 ft. wide, composed of mudiic, and occasional stones of ore. In the 20 west the lode is about 1 ft. wide, and at present unproductive. The tribute tributes are looking tolerably well.

**CARADON CONSOLS.**—Wm. Rich, Aug. 11: The ground in the 80 is moderate for driving, and the cross-course very regular. The engine lode, in the 80 east, is better developed than formerly, and has more floor-space in its composition, which is generally considered a good indication for copper. The lode is now 5 ft. wide, producing black and yellow copper ore, and native copper, worth 10s. per fm.; the same level going east, on No. 2 north lode, after passing a good bunch of yellow copper ore, is at present unproductive. In the rise, west of the cross-cut, on the caunter, the lode is 4 ft. wide, worth 12s. per fm. We have large quantities of stuff, both of copper and tin, at the surface, accumulating until the stamps and dressing-floors can be got ready; after which it will be turned to good account.

**CARDIGAN CONSOLS.**—J. Sanders, Aug. 11: There is no change to notice since my last report. Copper shaft is still in process of sinking. It is 3½ fms. below the 10; the part of the lode being carried about 4 feet, is poor at present; the shaft was not set on Saturday, the former contract (4 fms.) not yet being finished. In dressing the ore from the stopes, I find it is turning out a little better than I calculated; during the past month the yield have been about 1 ton per fathom on an average, the present value is about the same. Two of the stopes were set on Saturday, to twelve men, at 4s. per fm. The men who worked in the stopes west of the winze below adit refused to take it at that price, consequently this stopes is not set as yet. We have driven north through the lode in the 10, which we find to be poor in that direction, but as a part of it is still standing south of the level, we shall now drive through it in that direction also. No lode has been met with in the cross-cut north from the adit as yet. We have now 65 tons of ore in the dressing.

**CARN CAMBORNE.**—Jas. Secombe, Aug. 10: The engine-shaft is sunk to the 30; the shaftmen are now engaged cutting plat, preparatory to cross-cutting towards the lode. Clarke's lode, in the 13 east, is producing good stones of copper ore; west at this level the lode is rather disordered, as we are nearing a cross-course. The adit level, driving east, is worth 5s. per fm.; west at the same level, 5s. per fm. The south lode, at the adit level west, is producing stones of ore. The stopes continue to produce their usual quantities of ore.

**CEYEN CLIFF.**—M. Davies, Aug. 13: At the engine-shaft, sinking below the 130 yards, the bottom for the last 10 days has been poor, a bar of white stone coming in the lode; this has occurred twice before, and after sinking from 1 to 1½ yard the lode of ore has come in again strong. The spar is improving in quality, and there is no doubt we shall soon come into ore again. No levels have been put out of the shaft, our object being to sink down 20 yards under the last level before putting out; we have already sunk through 5 yards of good ore ground.—Susan Shaft: We are continuing the driving, of the 80 yard levels, east and west, but making very little progress, the air being bad there being no wind at surface. The west end is worth 1½ ton per fm. In the east end the lode improves daily, and we are getting rich stones of tin, not merely from the Thistle Field lode, but from the 80 lode in the back is worth 2 tons per fm. We sold 6 tons of lead to Mr. Tregealla, and delivered them on Saturday last.

**CORNUBIA TIN.**—J. Symons, P. Finch, Aug. 13: The public monthly setting took place on Saturday last, when the following bargains were set:—To drive a cross-cut north of flat-rod shaft, in the 70, by six men, at 70s. per fm. To stopes three backs in the 60, on No. 4, No. 5, and No. 6 lodes, at the flat-rod shaft, by fourteen men, at 34s. per fm. To stopes a back in the 50, west of Trestrail's shaft, on No. 4 lode, by five men, at 21s. per fm. To stopes two backs in the 40, at this shaft, on No. 4 lode, by five men, at 21s. per fm. Two stopes at Knight's shaft, in the 20, on No. 3 and No. 2 lodes, each stopes at 18s. per fm. To fill and land, by six men, all the stuff at flat-rod and Trestrail's shafts, from the different levels in the mine, at 17s. 10s. for one month. To fill and land all the stuff at Knight's shaft, by two men, at 6s. for one month. To spill, fill, and put to stamps, by six men and two boys, tinstuff enough to keep 32 heads fully supplied, at 20s. for the month. To land all the stuff from the stamps, drags, and put the same to the buddies as required, at 3s. for one month. We have cut into No. 5 lode, in the 70, nearly 8 ft., and have taken rich stones of tin, not merely from the leader, but from the north wall, we can only say the lode, so far as cut into, is quite as good as ever seen at any other point, and promises to be fully as large, therefore we must have 3 or 4 feet more to get through it; when done, we intend to drive east and west on its course as soon as possible, and at the same time continue the cross-cut to No. 6 lode, which is about 5 or 6 fathoms further north; and from the favourable appearance of the ground in the 70 cross-cut, and the productive character of this lode in the level above, we are fully persuaded it will prove satisfactory. The lode in the different stopes at flat-rod shaft, in the 60, will average 3 ft. wide, and, on the whole, are rather improved in quality; also the lode in Trestrail's shaft, contains quite as large, and the stopes in the 30 is still yielding some beautiful stones of tin, while our prospects at Knight's shaft are of a very encouraging nature, both from the size and character of the lode; and as soon as this shaft is down to the 30, we shall lay open a very large quantity of profitable tin ground. The stuff now stamping is, on the whole, much better, and if it continues, it must tell on our next monthly sale of tin, which, in point of produce, will exceed any we have had.

**CROOKHAVEN.**—Capt. Higgins, Aug. 10: In driving the 40 fm. level south I find the ground getting easier for exploring, and more congenial for mineral, present price 4s. 10s. per fathom. In the 20 fathom level, driving south of the engine-shaft, we have gone through a great deal of spar and chlorite; this is evidently the north portion of

the lode; the end is getting into white killas, and indicating more lode ahead of us price 4s. 10s. per fathom. We have about 4 feet more to drive to intersect the south portion of the lode in the 7 fm. level.

**CROWN CONSOLS.**—Wm. Paul, Aug. 11: I beg to enclose a list of produce of tin samples of stuff raised from the 30, where the lode has recently been intersected at Ward's engine-shaft. I examined the said lode yesterday, and am well pleased with its appearance. I believe it will yield 30 barrows per fathom, equal to the average of the three samples—2s. 10s. 6d. per barrow, or 85s. per fm., for the end going west; it is also yielding some good copper ore, but it is so mixed up with jack that I fear the price per ton will be kept down while extending the levels to open ground for tributaries. The lode in the east end is yielding some tinstuff, but is much better for copper ore, although it will hold good; the price will be kept low while driving, the rich ore being mixed with tin stuff. Tributaries will be able to save the different kinds of ores much more distinct than at network men. The lode, on the whole, has a splendid appearance, and I have no doubt will yield an abundance of copper ore; the ground being so easy and inexpensive for timber, will be wrought with good profit to the company. We have just commenced sinking the gossan shaft on the course of the lode below the adit; the ground is completely drained by cutting the lode at the 10 fm. level; we shall be able to report on this next week.

**CROWN CONSOLS.**—J. Seymour, Aug. 12: I find no difficulty to report on these mines now; I am happy to be able to say that our prospects here far exceed the expectations of the most sanguine reports. Last Friday was our set and pay day, when the following bargains were set:—Ward's engine-shaft to sink 9 ft., this will make it 14 ft. below the 10 fm. level, to put in plat, roller, post-house, rods, cut down plat, put in barrow and cistern, 2x new lift, case and divide the shaft, put in ladder-rod, 8s. as per bargain, 26s. the two ends. To drive on the course of D lode, east and west, at the 10 fm. level, let to eight men, at 30s. per fathom, limited 6 fms. in each end. Some of the stones taken out from the lode in this end to-day I should think to be worth from 6s. to 8s. per barrow; the three samples assayed, which is a fair average of the lode just cut, are as follows:—2s. 17s. 11d., 2s. 12s., and 4s. per barrow. There is not so much tin in the eastern end, but more copper—a good profitable lode. We let the little gossan shaft to four men and two boys, to sink from the 10 fms.; the lode in this shaft produces about 2 tons of fair quality copper ore per fathom. We let the James shaft to sink to four men and two boys, at 45s. per fathom; the lode here looks well, producing tin, copper, and blende—a good profitable lode. At the end of this month we shall have two pitches to let in the 10 fm. level, when there will be a communication between Ward's and the gossan shaft; my price as tribute, if the lode yields good in the western end, will not be above 2s. 6d. in 17, and about 4s. for the eastern back; I think this would fairly remunerate the tributer for his labour; having had twenty-three years' practice in this way of working, I ought to know something about the business. Perhaps it may not be amiss to inform the shareholders that we have three other copper lodes traversing the set within 30 fms. to the north of the D lode, now working on, and at a large tin lode. I intend commencing a cross-cut to intersect them as soon as there is sufficient ventilation to supply the men. I hold a good opinion of some of those lodes as the one we are now working. Another important fact, I fully expect that Ward's shaft will be put down to the 20, and the lode intersected in that level, in about ten weeks from this time.

**CUDDRA.**—F. Puckey, E. Dunstan, Aug. 13: Walker's shaftmen are now engaged in cutting a plat at the 105, and also casing and dividing the shaft to that level, which will be completed in a fortnight from this time. In the 90, west of the shaft, the lode is 4 feet wide, worth 15s. per fathom. In cutting out the lode in the 75 west the lode is 5 feet wide, worth 10s. per fathom. In the winze sinking below the 75, west of shaft, the lode is still 6 ft. wide, worth full 80s. per fm. for length of winze. The lode in the stopes in the back of this level, west of the winze, is 5 ft. wide, and at the present time worth 20s. per fm. The lode in the stopes in back of the 40, west of the shaft, is 5 ft. wide, composed of quartz and peach, and worth for tin 12s. per fm.

**CWMBRANE.**—J. Pollard, Aug. 13: The engine-shaft, sinking below the 40, is producing 1½ ton per fathom. The 40, driving south, is favourable for progress. The stopes in the 30, east of the shaft, are producing 5 tons per fm. The winze sinking below the 30 is producing a little lead. The lode in the 30, driving below the 30 north is cleared and timbered 6½ fathoms. The 30, driving from Miner's lode, is producing occasional stones of lead. The stopes, south of shaft, below the 20, is producing 10 cwt. per fm. No alteration in the tribute pitches since last report.

**CWM ERFIN.**—Aug. 11: The lode in the rise over the back of the 32 fathom level, 50 fms. east of the boundary, is 5 ft. wide, containing clay-slate, quartz, and branches of silver-lead ore disseminated throughout, altogether yielding dressing work of low quality. The lode in the winze, sinking below the 20 fm. level, has a similar appearance, with a communication with the above rise, before mentioned, may be expected by the next report. The lode in the 30 fm. level, going east of the boundary, is 4 ft. wide, composed of clay-slate, blende, quartz, and silver-lead ore, yielding from 12 to 15 cwt. of the latter per fathom, and shows symptoms of further improvement. The lode in the 10 fm. level, going east of the boundary, has continued to lay open some very productive ground since the last report. The lode in the present end is 5 feet wide, and worth from 2½ to 3 tons of silver-lead ore per fathom. The lode in the deep adit level, going east of the cross-cut, is 6 ft. wide, and worth 1½ ton of lead ore per fathom. The lode in the 10 fm. level, going west from the engine-shaft, is 3 ft. wide—unproductive. The lode in the different stopes over the back of the 10 and 20 fm. levels are without any material alteration, yielding on an average from ¼ to 1 ton of silver-lead ore per fathom. No other alteration to notice.

**DALE.**—R. Nines, Aug. 13: The sinking of the new shaft is going on well, and so are all the other works.

**DEVON AND CORNWALL UNITED.**—T. Neill, Aug. 11: At George and Charlotte, in the 12, both east and west of Ley's shaft, the lode is looking kindly. In the winze in the bottom of the deep adit level the lode is worth 5 tons of ore per fm. We have commenced driving the deep adit level east. At William and Mary, the lode in 34, both east and west, presents no change to notice. In the 22 west the lode is looking more promising, and producing 3 tons of ore per fm. The stopes in the bottom of the 22 west are worth 3 tons of ore per fm. In the stopes in the bottom of the 22 east the lode is producing from 3 to 4 tons of ore per fm. In the 22 east the lode is worth 2 tons of ore per fm. The stopes in the bottom of the 10 is worth 4 tons of ore per fm.

**DOLFEWYNOG.**—T. Kirkpatrick, Aug. 11: I am pleased to inform you that at last we have forked the water out from No. 1 shaft. To-morrow Capt. Williams is going to make a general underground survey, and report upon the state of the mine in general.

**DRAKE WALLS.**—Thomas Gregory, August 13: The branches in the 102, east of Matthews's, are worth 6s. per fathom. In the Tye level south we have intersected some branches of the lode, and the lode is worth 14s. per fathom. The branches in the 60, west of Brenton's, are worth 12s. per fm. The branches in the 40, west of Brenton's, are worth 12s. per fm. The branches in the 40, west of Brenton's, are worth 12s. per fm. Hooper's rise continues worth 12s. per fathom. Stephen's winze is progressing very satisfactorily, and the branches are worth 10s. per fm. We are laying open a good piece of tin ground in this part of the mine, but for want of surface water our stamps are all idle. No. 3 copper lode, in the 70, is 2 ft. wide, composed of quartz, capel, silver, and copper ore, of a very promising character. The general prospects are improving.

**EAGLEBROOK.**—H. Tyack, Aug. 10: The last few days have brought with them a severe change in the weather, and filled our reservoir. The water is now in fork, and the men have resumed working their bargains to-day.

**EAST BRONFLOYD.**—C. Williams, Aug. 11: The cross-cut north in the 15 the part of the lode we are now intersecting, is looking much better than anything I have seen yet. We have cut into much water in the bottom of the engine-shaft, which naturally delays our progress in completing the 10, but, under the circumstances, the men are using every effort to finish their contract.

**EAST CARADON.**—J. Secombe, Aug. 12: Caunter Lode: The 50 east is worth 12s. per fathom; the 60 east, 8s.; the 70 east, 26s.; and the 70 west, 10s. per fm.—New Lode: The 70 east is worth 6s. per fm. The 70 west is yielding saving work.

**EAST CARN BRER.**—T. Glanville, J. Scholier, Aug. 13: In the 58, driving east of the western shaft, the lode is yielding 2 tons of ore per fm. In the 58 west the lode is yielding 1 ton of ore per fm. In the winze sinking below the 50 the lode is yielding 1 ton of ore per fm. In the 50, east of the new shaft, the lode is yielding 1 ton of ore per fm. In the 60 east we have intersected the cross-course, and are now rising to hole to the 50, for ventilation. The other parts of the mine are much as usual.

**EAST CLOGAU (GOLD).**—Kenrick Roberts, Aug. 11: In the St. John's lode, No. 1 lode, we have continued now for some weeks without undergoing any important change in its appearance. Our progress during the last week's driving was 6 ft. St. James's No. 2 level: with the greatest pleasure I have to inform you that it has now a very favourable appearance, far surpassing any that has been previously seen; the lode is improving, being now 3 ft. in breadth, composed of quartz, which, in my opinion, is very favourable for gold. Our progress here was 5 feet 6 inches.—St. John's Cross-cut: Our progress was 7 feet.

**Cophall Court.**—In company with your secretary I last week visited the mines at East



about as hardening and in different places, were I have no doubt we shall find some very good. At the Angle rod-shaft, on the Squiller lode, we have got all in a fair course of working. We are busily engaged at this point at present in clearing and securing the 50, or bottom level, south from the shaft. We want to clear this level to the end to see if the lode is worth driving upon, and also to see if there is any ground we can set on tribute as well. The deep adit level at the Stanley Mine is in a

tain its size and value; the lode in the same level west is without change to notice since last report, the ground is a little improved for driving. The lode in the winze sinking below the 52 is worth about 20¢. per fm. The lode in the 53, west of engine-shaft, is disordered at present by a horse of killas, consequently not producing any ore to value. The three stones in back of the 52 are worth from 15¢. to 20¢. per fm. The winze in the

level is communicated to the level above. The 30 has since been set to drive east of cross-cut, where the lode is 1 ft. wide, and worth 61, per fm. The lode in the 10, east of cross-cut, continues to be worth 121, per fm. We are now busily engaged in fixing the bottom plunger-lift, and have set the 40 cross-cut to drive south of the engine-shaft, to cut the south lode. Other places are without change since our last report. We fully believe the day is not far distant when we shall begin to increase our returns.



producing a little tin, having work. The lode in the deep adit end, going east of old engine-shaft, is 10 in. wide, giving occasional rich stones of tin. The stopes in the western part of the mine are not so good at present as for some time past. Other parts are without change.

**WHEEL UNION.**—T. Glanville, Aug. 7: Put-work Setting: The flat-rod shaft to sink under the 76 by twelve men, at \$84. per ton. The 76 to drive west of the flat-rod



shaft; by two men, at 51. per fm. The 76 to drive east of flat-roof shaft by four men, at 71. per fm. The 18 to drive east of the cross-cut by four men, at 51. per fm. The 30 cross-cut to drive south by two men, at 91. 10s. per fm. The 55 to drive east by six men, at 71. per fm. The old engine-shaft to sink below the 20 by nine men, at 251. per fm. The 40 to drive east, on the engine lode, by two men, at 71. per fm.

— T. Glanville, Aug. 19: In the 35, driving east, the lode is worth 201. per fm. In the 18, driving east, the lode is 3 ft. wide, mixed throughout with copper ore. In the flat-roof shaft the lode is 5 ft. wide, worth 101. per fm. for tin. The shallow edit east we have not yet interested the lode; the men have been prevented working part of the month by the timbering giving way and filling the level with stuff; we hope to cut the lode this month. In the deep edit east the lode is still in an unsettled state, and not of much value. We have completed cutting down the engine-shaft from surface, and have put the men to divide and case it, which will be completed in about three weeks; we shall then draw the tinstuff now broken, about 70 tons, and commence sinking the engine-shaft in the tin ground below the deep edit, by six men. In the west part of the mine, at Wheal Whidden, we have two men and two boys raising good tinstuff from the shallow edit, and as soon as they have cut down the side of the level we shall drive the end, and put two pairs of tributaries to work in the back and bottom of the level. We have commenced making tin-floors at the engine-shaft, at the proper level to supply the stamps. We expect the engine-house will be completed by the end of this month, we shall then begin to lay out our dressing-floors.

WHEAL UNITY CONSOLS.—W. H. Reynolds, Aug. 11: The lode in the 40 west has improved to 14 ton of copper ore per fathom, and there is still a good lode in the 40 east. The 30 fm. level ends are ore, and have a promising appearance.

WHEAL UNY.—S. Coads, M. Rogers, Aug. 8: Tin lode: The lode in the 100, west of engine-shaft, is worth 151. per fm. for tin. The 90, west of incline shaft, is worth 61. per fm. The 80, east of engine-shaft, is worth 61. per fm. The 60, west of incline shaft, is worth 51. per fm. Copper lode: The lode in the 55, west of No. 3 shaft, is about 30 in. wide, and of a very promising appearance, composed of quartz, muddle, and rich stones of copper ore. The lode in the 55, east of No. 3 shaft, is worth 201. per fm. The lode in the winze sinking below the 45, east of No. 3 shaft, which is coming down 4 fms. behind the 55 fathom level end, is worth 121. per fm. The lode in the 45 fathom level, west of new engine-shaft, is about 8 in. wide, producing stones of copper ore, but not to value.

YARNELL.—R. Barkell, Aug. 12: The cross-cut at the 50 is progressing favourably; the end is letting out more water, and the ground is still looking favourable for copper. There is no alteration in either of the stopes, each yielding about 2 tons per fathom.

### STANNARIES COURT.

The quarterly sittings of this Court commenced at Truro, on Wednesday, before his Honour the Vice-Warden, Mr. E. Smirke. The following business was disposed of:—

FAINTER v. VOLES AND OTHERS.—EAST ALFRED CONSOLS.—This was a pursuer's petition against James Voyle, of Manchester, Richard Mitchell and T. M. Eustice, as shareholders in the above mine, for recovery of calls. Mr. Stokes moved against Mitchell, who owed 601. 19s. 7d., and Eustice, who owed 51. 15s. 10d. On the usual affidavit and registrar's certificate, he moved for a decree *pro confesso* for payment.—Granted; payment to be made in seven days.

WESCOMB v. BRUTTON AND OTHERS.—PROSPER UNITED MINES.—A pursuer's suit for recovery of amounts due from defendants as shareholders from Bruton, 151. 15s. 5d.; Venning, 6071. 1s. 8d.; Wilkinson, 121. 9s. 7d. On the registrar's certificate, and affidavit of the pursuer, Mr. Marrack moved for decree *pro confesso* for payment.—Decree granted; payment to be in ten days.

SLEMAN v. BURTON.—SOUTH WHEAL LOVELL.—Mr. Marrack, on the part of the defendants, T. C. and Elizabeth Burton, moved to dismiss the petition for want of prosecution. It was a pursuer's petition, and when it was ripe for hearing, the plaintiff, through his attorney, countermanded it, and filed a general petition for winding-up the affairs of the mine under the Companies Act, 1862. Mr. Marrack submitted that under those circumstances he was entitled to the dismissal of the pursuer's suit, and to his costs thereof, the latter being the object of his application.—Mr. Chilcott, for the plaintiff, showed cause against the application. He contended that the moment the order for winding-up was made the previous pursuer's suit was stopped, by the 202d section of the Act. He also quoted the 201st section in support of his argument; and submitted also that the application for dismissal and for costs was premature, as it could be shown defendant owed a large sum of money to the mine, in which case his costs could not be allowed.—Mr. Marrack remarked that there might be various defences against the claim if the pursuer's suit were proceeded with. He moved in the case chiefly to decide a matter of precedent.—The Vice-Warden said he would consider the application.

OLD TOLGUS UNITED.—In the matter of winding-up this company, Mr. Marrack moved for an order to send three contributories to settle the list, those persons being resident beyond the jurisdiction, in Scotland and Ireland.—Granted.

CATHEDRAL MINING COMPANY (GRENWICH).—Mr. Stokes appeared in support of the petition for winding-up this company. He stated that the petitioning creditor was a Mr. Cox, who had proceeded in the usual way by creditor's petition against the machinery and materials, had obtained a decree *pro confesso*, and then for sale; but, upon the registrar endeavouring to take possession, neither ore nor materials could be found. The plaintiff then proceeded under the Winding-Up Act, and his petition contained the usual allegations—among others, that there had been this customary decree, and that the debt remained unsatisfied. The petition was served personally on Aug. 1, on the principal agent of the mine, Joseph Webb, of Redruth. It had also been advertised in the newspapers, as directed by the Court. He now moved for an order for winding-up the mine.—Mr. Chilcott said he was instructed by Mr. M. E. Nicholls to oppose the application, but he was at present without either affidavits or witness, and, therefore, could not say much in the case. He wished to state, however, that there was a fatal objection to the petition, which was that there were not seven shareholders in the mine at the time the goods were ordered. Mr. Nicholls was the sole shareholder, and he tried to form a company, but, failing to do so, he in December last sold the mine to a Mr. Maclean, who had also been trying to form a company.—Mr. Stokes pointed out that in the prospectus of the mine there were five directors named, which did not look as if there was only one shareholder in the mine. The case was then adjourned till Monday, for the arrival of affidavits or witnesses.

CARN VIVIAN MINE (WARRINGTON, near Bodmin).—This was another petition for winding-up under the Companies Act, to which there was no opposition. Mr. Chilcott showed that the petition had been advertised in the newspapers, as ordered, and had been served upon James Follage, the manager of the mine.—The order for winding-up was then granted.

HORTINGDON MINING COMPANY.—Mr. Chilcott said this was also a petition for winding-up under the Act. The mine was situated in the parish of Dean Prior, Devon, and ceased working in 1861. There was no opposition in the case. He showed that the petition had been duly served and advertised, and said that as the debts of the contributories were rather small, he had affidavits to show that there were other considerable debts due. He asked for the usual winding-up order, and it was granted.

The Court was then adjourned.—West Briton, Aug. 14.

NEW PORTABLE GAS FURNACE.—We have lately had an opportunity of witnessing the action of a new portable gas furnace, invented and patented by our townsman, Mr. W. Gore. As this furnace appears to us far to exceed anything that has previously been done in this direction, we cannot doubt that a description of it will prove interesting to our readers, to whom the invention is likely to be of more practical value than to any other community in the kingdom, and probably in the world. The general features of the furnace are as follows:—It produces a "white heat" by means of ordinary coal gas and atmospheric air, without the help of bellows or tall chimneys, and the melted substances are at all times perfectly accessible without chilling them or interfering with the action of the furnace; and if the crucible breaks the melted substances fall, without loss or injury, into a dish beneath. This is an important advantage to workers in gold and silver. The furnace is simple in construction, safe in use, portable, requires no brickwork erections, and may be used in any situation where gas is available. It is set in action simply by lighting and adjusting the gas, exactly as in an ordinary gas-lamp, and requires no further attention. It consists essentially of two open cylinders of fire-clay, one within the other, the outer one being much thicker and a little taller than the other; and a gas-burner of very peculiar construction placed at the bottom of the interior cylinder. The crucible is supported inside the interior cylinder, near the top, by three projecting rings of fire-clay, forming part of that cylinder. The outer cylinder is covered by a movable plate of fire-clay, which has a hole in its centre for the introduction of the crucible and materials, that hole being closed by a clay plug, with a small hole in it for stirring or examining the melted substances. The burner consists of an upright metallic tube, open at both ends, deeply corrugated at its upper end, so as to prevent the appearance of a star of numerous radiations, and the corrugations diminish gradually to the base of the burner by a common gas tap; it there mixes with a large quantity of air, and the mixture rises upwards; the flame commences at the top of the burner, and burns with great intensity within the inside cylinder to the height of the crucible; the heated products of combustion pass over the top edges of that cylinder, then downwards between the two cylinders, and into the chimney through a hole in the side of the outer cylinder near the bottom. The outer cylinder is enclosed within a sheet-iron casing, which has a chimney 4 feet high attached to it, and is supported upon three iron legs, making the whole apparatus portable, and capable of being used either in a workshop or in the open air, as may be desirable. The various clay portions of the furnace may be used without injury to the action of the furnace until they are completely worn out, and the arrangement is such that they may then be replaced by new ones with perfect facility. Several sizes of the furnace are manufactured. The first and smallest size consumes 33 cubic feet of gas (value 14d.) per hour, and is suitable for assayers, jewellers, analytical chemists, experimentalists, dentists, and others. It is capable of fusing 8 ozs. of copper, or 6 ozs. of cast-iron; copper begins to melt in it in about twelve minutes from the time of lighting. The second-sized one consumes about twice that quantity of gas, is suitable for manufacturing jewellers generally, and for a great variety of practical persons who require to melt small quantities of gold, silver, copper, German silver, brass, cast-iron, glass, and other substances, or require a small crucible heated to high temperatures. It is capable of melting 45 ozs. of copper, or 40 ozs. of cast-iron, and with its heat up it melts 1 lb. of copper in eight minutes; copper begins to melt in about twenty minutes from the time of lighting. We understand that a still larger size, estimated to fuse 500 ozs. of copper, is being constructed.—Birmingham Post.

### WEATHER PREDICTIONS.

By THE EDITOR OF THE MINING JOURNAL.

Sir,—In the South of England the weather has not been according to my last prediction, while in Ireland and Scotland rain has fallen since the 11th, as stated in my last letter. But one thing explains another. The present is the first drought in our changeable climate since I made my discovery, which renders it somewhat difficult for me to understand the order of such a dry period. But, to all appearance, the present drought will be of some lengthened duration. As far as I can see, there will be no heavy, soaking rains until late in September. This, at present, is the only hope I can give our farmers. This drought will, undoubtedly, prove a serious drawback to the pasturage for their farming stock. I shall know as soon as anyone when the present fine weather will break, and will give you the earliest information. GEORGE SHEPHERD, C.E., 26, Throgmorton-street, Aug. 14.

\* With this week's Journal we give a SUPPLEMENTAL SHEET, which contains—Cannock Chase, and its Coal Mines—No. II.; The Coal Mines of Bohemia; Foreign Mining and Metallurgy; Meetings of the Bantay Bay (Slate and Slab), St. Ives Wheel Allen, and Worthing Mining Companies; Sales of Black Tin; Gas from Keroseene Tar and Hard Wood; File Making by Machinery—Bernot's Patent (illustrated); Casting Large Ingots of Steel; Bessemer Steel; Oil from Shale; Treatment of Poor Copper Ores for Iron; Obtaining and Applying Motive Power; Siberian Graphite; Wrought Iron Cannon; New Mode of Lighting, &c., &c.

\* With last week's Journal we gave a SUPPLEMENTAL SHEET, which contains—Copper Mining in Germany; Quantities and Value of Coal and Metals produced in the United Kingdom; Foreign Mining and Metallurgy; English and French Armour Plate Tests; Meetings—Montes Aurores (Brazilian); Great Barrier (Land, Harbour, and Mining); Silver Vein, Bryntal, and North Pool Mining Companies; Gold in Nova Scotia; London and County Bank (meeting); Entertainment to the Duke of Saldanha; Foreign Mines—Don Pedro North del Rey, East del Rey, Valgodemard, &c.

\* With the Journal of July 25 a SUPPLEMENTAL SHEET was given, which contains—Cannock Chase, and its Coal Mines—No. I.; Money Making (concluded); Foreign Mining and Metallurgy; Meetings of Public Companies: Wheal Crofty, East Wheal Russell, Lady Bertha, West Chiverton, North Rosewarne, Aberffrow, Dun Mountain, Australian Agricultural, English and Canadian, Anglo-Danubian Steam Navigation and Colliery Company; Manufacture of Iron and Steel; Oxide of Zinc as a Pigment; New Blasting Powder; Magneto-Electric Machines; American Colliery Engineering; Mineral Transport in France.

### The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, Aug. 14, 1863.

COPPER.		S. & d.	
Best selected, p. ton	98	0	—
Tough cake, p. ton	95	0	—
Tube, p. ton	95	0	—
Burma Burma, p. lb.	0	0	0
Copper wire, p. lb.	0	1	0
ditto tubes, p. lb.	0	1	0
Sheeting & bolts, p. ton	102	0	—
Bottoms, p. ton	104	0	—
Old (Exchange), p. ton	85	0	—

  

IRON.		Per Ton.	
Bars, Welsh, in London, p. ton	6	15	0
Do, to arrive, p. ton	6	12	0
Nail rods, p. ton	7	0	5
Do, Stafford, p. ton	7	15	0
Do, ditto, p. ton	7	10	0
Hoops, ditto, p. ton	8	7	0
Sheet, single, p. ton	9	7	0
Fig. No. 1, in Wales, p. ton	8	10	0
Refined metal, ditto, p. ton	4	0	5
Bars, common, ditto, p. ton	5	15	0
Do, merchant, in Tees, p. ton	6	10	0
Do, railway, in Wales, p. ton	5	15	0
Do, Swed. in London, p. ton	11	0	12
To arrive, p. ton	11	0	12
Fig. No. 1, in Clyde, p. ton	2	15	0
Do, f.o.b. in Tees, p. ton	2	10	0
Do, forge, f.o.b. in Tees, p. ton	2	7	0
Railway chairs, p. ton	5	10	0
spikes, p. ton	11	0	12

  

LEAD.		S. & d.	
English Pig, ordy, soft, p. ton	20	0	20
Do, (WB), p. ton	21	0	—
Do, sheet, p. ton	20	15	0
Do, red lead, p. ton	21	0	15
Do, white, p. ton	26	0	27
Do, patent shot, p. ton	22	15	0
Spanish, p. ton	19	5	0

  

BRASS.		Per lb.	
Sheets, p. lb.	8	3	10
Wire, p. lb.	9	4	10
Tubes, p. lb.	11	13	10

  

FOREIGN STEEL.		Per Ton.	
Swedish, in kegs (rolled), p. ton	15	10	0
(hammered), p. ton	15	10	0
Do, in faggots, p. ton	17	0	18
Do, English, Spring, p. ton	18	0	23
Bessemer's Engineers Tool, p. ton	0	0	—
Spindle, p. ton	30	0	—

  

QUICKSILVER.		Per p. bottle.	
Foreign, p. bottle	18	0	18
To arrive, p. bottle	18	2	18

  

SILVER.		Per lb.	
In sheets, p. lb.	23	0	—

  

TIN.		Per lb.	
English, blocks, p. lb.	0	0	—
Do, Bars (in barrels), p. lb.	116	0	—
Do, refined, p. lb.	120	0	—
Banca, p. lb.	0	125	0
Straits, p. lb.	0	120	0

  

TIN-PLATES.		Per lb.	
IC Charcoal, 1st qua. p. lb.	7	6	1
IX Ditto 1st quality, p. lb.	1	15	6
IX Ditto 2d quality, p. lb.	1	4	6
IX Ditto 3d quality, p. lb.	1	10	6
IX Coke, p. lb.	1	2	6
IX Ditto, p. lb.	1	8	6
Canada plates, p. lb.	12	0	13

  

YELLOW METAL SHEATHING.		Per lb.	
Sheets, p. lb.	8	3	10
Indian Charcoal Figs, p. lb.	6	12	6

\* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—We are unable to announce any great improvement in the Metal Market during the past week. It still assumes the appearance of inactivity. Buyers are not willing to exceed their requirements, at the same time there is every prospect of prices being firmly maintained, and the tone of our market strengthened under the auspices of an easier currency.

COPPER.—This metal continues decidedly flat; indeed, sales of manufactured have been effected at 21. under present quotations; and it is hardly probable that the late advance can be maintained unless an improved demand shortly springs up.

IRON.—A large business has been done during the former part of the week in railway bars, at 51. 15s. per ton at the works; but during the latter part makers have demanded and obtained 61. per ton at the works, as they are afraid of a further and more extended strike among their workmen, in which case they would, probably, have to increase their wages 10 per cent. Should this take place, merchant bars also will, probably, be quoted higher. Swedish iron may still be quoted at 111., although nothing at present offering. Scotch pigs have somewhat improved, 53s. 7d. to 53s. 9d. being the present quotations.

LEAD.—Prices remain unaltered—business limited.

TIN.—In accordance with our anticipation in last week's Mining Journal, the English smelters announced, on the 10th inst., a fall of 3d. per ton in blocks and bars, and 4d. per ton in refined, making present prices—blocks, 1151.; bars, 1161.; and refined, 1201. Foreign has, consequently, suffered a depreciation in value. Straits have been sold at 1181. cash, and Banca is not worth more than about 1241. to 1251. per ton, for which there is scarcely any legitimate enquiry. Consumers generally are well supplied, and it is not unlikely in a little time that a further fall will take place.

SILVER.—A moderate business has been done in this metal at reduced prices, and 181. may now be considered the utmost holders can obtain, and at which price some few sales are reported.

STEEL continues firm, and holders are looking for better prices, as the stock at present in London is gradually decreasing.

TIN-PLATES are looking well, large orders having been given out for the American market; so that, notwithstanding the decline in the price of tin, no change may be expected at present in their value.

QUICKSILVER is eagerly sought after, but cannot be obtained for [early shipment, the available stock in London being very limited.

BULLION MARKET.—Messrs. Pixley, Abell, and Langley quote—Gold bar, 77s. 9d. per oz. stand. last price; bar, fine, 77s. 9d.; bar, refined, 77s. 101d.; Spanish doubloons, 76s. 4d. per oz.; South American doubloons, 73s. 9d., and United States gold coin, 76s. 23d. Silver—Bar, 5s. 1d. to 5s. 14d. per oz. stand. last price; bar, containing 5 grs. gold, 5s. 14d.; fine cake, 5s. 51d. per oz.; Mexican dollars, 5s. 3d. to 5s. 31d.; Spanish dollars (Carols), 5s. 3d., and five-franc pieces, 4s. 111d.

NEW YORK, JULY 31.—The great change which took place in the beginning of the month in the aspect of the war, the consequent heavy decline in gold, and at one time the riots in our city, all have combined to unsettle business to such an extent that we have scarcely any transactions whatever to report during the last three weeks. There has been a general disposition to buy, but also the same disposition to sell at much lower prices. For the last five or six days gold has been comparatively steady at 127 1/2 per cent., after having been a fortnight ago as low as 122 1/2 per cent. We think that this has given already a little more tone to the markets, and, as the general impression seems to be that gold is not likely to rule much lower than to-day's quotation, we look for an improvement in business next month, when the usual demand for consumption will make itself felt. The whole trade has for four or five months past bought from hand to mouth only, and throughout the country stocks of all kinds of goods are small. Exchange on London, 141 per cent.—This is the first week of the month 800 slabs Straits were sold at 45 1/2 c., and since we have heard of only small sales, at 44 c. and 42 c. There are no large parcels offering, and it is difficult to quote any price; English is 40 c., and Banca nominally 50 c., both with small stocks. The importations for the month consist of 3000 ingots English. From the East Indies about 6000 slabs are expected. We estimate the stocks in first hands at 18,500 slabs Straits, 900 Banca, and 80 tons English, equal to 2400; total in Boston and New York, 21,800 slabs. The price realised at the Dutch auction of June 24, 74 c., was not quite so high as expected, and the European markets were at later dates dull. The foreign advance can, however, have but little influence here. Banca tin has gone almost out of use, and the sale of Straits has for the last few months been interfered with by the increasing consumption of English. The moment, however, that prices of Straits decline to within 1 c. or 2 c. of English, the preference for the latter will disappear; in fact, it is not now generally used in place of Straits.—SPELTZER has been sold in small parcels at 7 c. for Silesian and Lehigh. Of the latter kind the stocks are small, and it is now held higher, 7 1/2 c. and 7 3/4 c. Silesian, also, is held more firmly since the news of the advance in England. We have had an importation of 75 tons, and the stock of foreign is 700 tons.—COPPER: During the first days of the month an active demand sprung up, and 1,000,000 lbs. Lake were sold at 31 c. and 32 c., the latter for later delivery. Of Baltimore another 1,000,000 lbs. was taken by Government and Government contractors. After these sales the companies retired from the market, and there have been no sales of any amount since. A few small lots have been forced at 29 c. and 29 1/2 c. from second hands; but we quote 30 c. for both kinds, with little offering. The Baltimore and Cuba Smelting Company and the Bergen Port Company are under contract for some time to come, and the Lake companies have no large stocks on hand.

The arrivals of Lake copper have not been so early as usual, and the product of the mines is falling off somewhat, in consequence of the want of labour. The stocks in second hands are very light, as far as very little has been brought on speculation. The stocks of Chile copper are also light, and we believe but one consignment has been sent from Chile. It has been thought probable that American copper might be returned from Europe; but the stocks there are so much reduced that this is not likely.—LEAD has also been unsettled. About a fortnight ago 500 tons of foreign were sold at 7 1/2 c. and 7 40-100 c., when, with the higher rates for gold, holders demanded higher prices, and for small lots of Galena 7 1/2 c. and 7 3/4 c. were realised. But with little demand for consumption, the market is dull, and foreign can be bought to day at 7 1/4 c. The arrivals of foreign for the month amount to 550 tons, and of Galena to 500 tons. We estimate the deliveries of foreign at 500 tons, and the stocks at 7100 tons.—WINTERHOFF AND CO.

NEW YORK, JULY 29.—The demand for domestic Coal is moderate, the trade buying only to supply their present wants, and prices are lower; sales at retail, from yard, at \$7.50 to \$8.50. Foreign is in limited supply and in good demand. The supply of all kinds of iron is very small, and the market is generally very firm, particularly for American pig; the sales are 300 tons of Scotch pig, at \$34 to \$38, cash, mostly at \$34 to \$35; 500 tons of American ditto, at \$25, cash, delivered at Ellsworth, which is rather below the market, as most holders are very firm at \$25; 150 tons of common English bars, at \$73; 500 bundles of English sheet, at 5 1/2 c. for singles; 100 tons of ditto doubles, and 100 tons of wrought scrap, on private terms.

BOSTON, JULY 27.—There is nothing new to notice in Pictou or Sydney Coal. Most of the receipts were privately contracted for. Anthracite, in retail lots, has been selling at \$9 to \$10 per ton. In pig-iron there is no change. The sales continue to be confined to small lots at \$39 to \$40 per ton, cash and four months, for Scotch, Gartsherrie, and other brands, No. 1; and American pig, at \$35 to \$40 per ton, cash and four months. In bar and sheet-iron there is no change, and sales have been at previous prices.

The settlement of the fortnightly account took place in the MINING SHARE MARKET on Friday, and was very unimportant, in comparison with previous accounts, showing the little speculative business that is now transacted. Since our last, no novel feature has turned up, and the market sadly wants a good discovery or two to put life and spirit into it, because, as a general rule, the public never buy into anything when it keeps low and quiet (though it is generally the right time to do so), but rush eagerly into speculations when there is excitement and *furor* in any particular stock or share. The mines mostly dealt in have been Wheal Grenville, East Caradon, East Grenville, Herodsfoot, Pendean, Wheal Hope, North Roskear, Providence Mines, Stray Park, Seton, North Downs, East Basset, Clifford Amalgamated, &c. West Seton, 235 to 245; at the meeting the accounts showed a profit of 19831. 12s. 5d. on the two months, and a dividend of 51. per share (20001.) was declared, leaving 11571. 6s. in hand; the ores credited in this account amounted to 57881. 0s. 4d.; those sold, and to be credited in the next account, realised 60181. 8s. 3d. The mine is looking about the same as for some time past; the ends in tin, worth 431. per fm., and copper, 4 tons per fm.; the winzes, 2 tons per fathom; the stopes, 24 tons per fathom. East Caradon shares kept firm, and advanced to 29 1/2, 30, on Wednesday, but gave way after the report of Thursday, and leave off 29 to 29 1/2; the 50 east is valued at 121. per fathom; the 60 east, 81. per fathom; the 70 east, 251. per fathom; the 70 west, 101. per fm.; the new lode is worth 61. per fm. Clifford Amalgamated shares not so firm, at 30 to 31. Clifjah and Wentworth, 7 to 8; Cook's Kitchen, 25 to 26; East Basset, 75 to 81; East Carn Brea, 7 1/2 to 8 1/2. Wheal Grenville shares have been greatly in demand, and leave off 6 1/2 to 7; in addition to the copper, 200 tons of which realised 14541. 13s. 6d. last week, the mine has sampled 419 tons of tinstuff, so that at the meeting, on Monday, the accounts are likely to show a good profit. East Grenville shares have not been so firm, and leave off 3 to 3 1/2. East Gunnis Lake and South Bedford, 27s. 6d. to 32s. 6d. West Chiverton, 28 to 29; the 70 west, on Williams's lode, reported worth 501. per fm.; the 80 west, 701. per fm.; the 80 east, 801. per fm.; the winze below the 70, 701. per fathom; the 70 west, on Elizabeth's lode, 251. per fathom. Chiverton, 7 to 7 1/2; East Wheal Russell, 3 1/2 to 3 3/4; Gonamena, 2 to 2 1/2; Great South Tolgus, 3 1/2 to 3 3/4. Great Wheal Fortune, 29 to 30; at the meeting a dividend of 15s. per share was declared. Herodsfoot, 37 1/2 to 38 1/2; Hingston Down, 2 to 2 1/2; Marke Valley, 5 1/2 to 5 3/4. North Crofty, 3 1/2 to 3 3/4; at the meeting a call of 1s. 6d. per share was made; the accounts showed a loss on four months of 2361. 5s. 2d.; the tin sold was 36 tons, and the same amount is expected for the next four months. The tin department is altogether looking well, and likely to improve, and make a good mine; but the copper department is poor. Nangles, 20 to 22 1/2; North Buller, 6 1/2 to 7; North Robert, 12s. to 14s. Wheal Crebor shares have not been so firm, and leave off 35s. to 36s.; no lode has been taken down in Cock's shaft this week, and the 84 west is worth 6 tons of ore per fathom. North Roskear, 23 to 24; North Treskerby, 3 1/2 to 3 3/4; Pendean, 61 to 7; Providence Mines, 41 to 42; South Froes, 70 to 72 1/2; South Tolgus, 42 1/2 to 45; St. Day United, 17s. 6d. to 20s.; St. Ives Consols, 27 to 28. Stray Park shares have been more in demand, and leave off 39 to 41. Bryn Gwio, 31 to 32; the mine has just sold 50 tons of lead ore, for 131. 4s. 6d. per ton. North Downs, 1 1/2 to 2 1/2; the stopes in the back of the 60 are worth 201. per fm.; in the cross-north, from Bennetts's shaft, in the 60, which is being driven as fast as possible, the lode is expected to be intersected in about 2 fathoms further driving. Wheal Seton, 220 to 222 1/2; at the meeting a dividend of 31. per share was declared. Tincroft, 21 to 22. West Trevelyan shares have been flatter, and leave off 7s. to 9s.; the lode in Charles's shaft is not looking so well, but may improve again. Calvadnaek, 5 1/2 to 6; at the meeting the accounts showed a balance of 5581. 6s. against the company, and a call of 12s. per share was made. The tin sales realised 20371. 9s. 2d. for the quarter, and the loss was occasioned by the erection of a new burning-house, &c. West Caradon, 21 to 22; Wheal Basset, 60 to 65. Wheal Hope, 1 1/2 to 2 1/2; pitches have been set in the 58 and 60, at 41. and 51. per ton, and altogether 30 tributaries are now employed at various prices. Wheal Edward, 2 1/2 to 2 3/4; Wheal Harriett, 39s. to 41s.; Wheal Kitty (Lelant), 9 to 10; Wheal Kitty (St. Agnes), 8 to 8 1/2; Wheal Ludcott, 3 to 3 1/2; Wheal Union, 2 1/2 to 3. Wheal Unity, 12s. to 14s., and rather more in demand; the ends in the 40 east and west look better



from 150 tons to 500 tons per day; and that one-third of the purchase-money will be taken in paid-up shares.

The Great Chando Copper and Tin Mining Company, with a capital of 30,000l., in shares of 3l. each, has been formed for the purpose of working a valuable piece of mineral property, bounded on the east by Wheal Jewell and West Damsel, on the south by Ting Tang, on the west by Trefusis, and on the north by the Grambler and St. Aubyn Mines, all of which have been successful. About 2500l. has been expended in laying open the mine, and it is considered that the most expensive works have now been completed. Seven productive and well-defined copper lodes, and several tin lodes, have been laid open at a depth of 27 fms. from surface, the working of which can be at once commenced. The sets is about 400 fms. square, and is held for 19 years unexpired, at 1-18th dues. The purchase-money has been fixed at 5500l., of which 3000l. will be taken at paid-up shares, and the remainder in cash, by instalments. The sets has been carefully inspected and favourably reported upon by Capt. John Daw, of Carn Brea Mine; James Pope, of Wheal Bassett; Thomas Glanville, of North Bassett; John Michell, of Grambler and St. Aubyn; Chas. Thomas, of Redruth; Thomas Richards, of Camborne; Noah Coward, of Tavistock; Joseph Jennings, of Trevean; Francis Pryor, of Trelawny; Thos. Mitchell, of Parys; and Joseph Webb, of North Buller, all of whom concur in the opinion that the sets comprises a very valuable piece of mineral ground, and is well worthy of a vigorous prosecution.

The Neustadt Charcoal Ironworks Company, with a capital of 230,000l., in shares of 20l. each, has been formed for the purpose of carrying on the celebrated ironworks of that name, on the Hanover and Bremen Railway. The works are in full going order, and capable, with slight additions, of turning out annually 5000 tons of boiler-plates and 3000 tons of bars. The erections are all of a very substantial kind, and the deposit of iron belonging to the works is practically inexhaustible; it is of very pure quality, and contains from 42 to 44 per cent. of iron. The mass of ore lies open to the day, and is worked without the expense of sinking shafts, pumping, &c. The fuel employed is half charcoal and half peat, entirely free from sulphur and phosphorus; plates, and all other descriptions of the finest quality, are manufactured. The purchase-money is fixed at 160,000l., being less than one-half the original cost, and the purchase includes 650 tons of puddle iron, and about 20,000,000 pieces of dried peat. It appears that, even in the improbable event of the repeal of the high Zollverein import duties on iron, a clear profit of 20 per cent. would be realised. A line of railway from Ringelheim to Hildesheim, now in course of construction, proves very advantageous to the company. The property has been carefully inspected and reported upon by Mr. John Hedley, the Government Inspector for the Derbyshire district, who has also accepted a seat at the board, and the directors also includes other gentlemen of sound practical experience in connection with our siderurgical industry.

At Redruth Ticketing, on Thursday, 2385 tons of ore were sold, realising 15,581l. 2s. 0d. The particulars of the sale were:—Average standard, 118l. 11s.; average produce, 6l.; average price per ton, 5l. 8s.; quantity of fine copper, 197 tons 18 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
July 9.....	1880	118 7 0	6 1/2	5 8 0	478 7 6
" 23.....	5890	122 6 0	6 1/2	4 10 0	76 0 0
" 30.....	3346	115 15 0	7 1/2	5 12 6	77 15 0
Aug. 6.....	3553	119 4 0	6 1/2	5 4 0	78 0 0
" 19.....	2585	118 11 0	6 1/2	5 8 0	78 9 0

Compared with last week's sale, the standard has advanced 10s., and the price per ton of ore about 9d. Compared with the corresponding sale of last month, the standard is stationary.

At the Swansea Ticketing, on Tuesday, 2075 tons of copper ore were sold, realising 24,267l. 8s. The particulars of the sale were:—Average standard, 101l. 13s. 6d.; average produce, 13 11-16; average price per ton, 11l. 13s. 6d.; quantity of fine copper, 271 tons 5 cwt. The following are the particulars of the sale during the past month:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
July 7.....	2060	99 9 0	14 15-16	12 12 0	284 6 0
" 25.....	2281	101 11 0	13 13 6	13 13 6	85 19 0
Aug. 11.....	2075	101 13 6	13 11-16	11 13 6	89 6 6

Compared with the last sale, the advance has been in the standard 5l., and in the price per ton of ore about 13s. 6d. Of the 2075 tons of ore sold on Tuesday, 1132 tons were British ores, which gave an average produce of 11l., and sold at an average standard of 104l. 9s. = 9l. 10s. 6d. per ton of ore; the remaining 943 tons were foreign ores, which gave an average produce of 16l., and sold at an average standard of 99l. 8s. = 14l. 5s. per ton of ore. On Aug. 25 there will be offered for sale 1394 tons from Berehaven, Cobbe, Knockmahon, Del Soto, Ballycummisk, Fortune, Cape, Connerree, and elsewhere.

At Dolcoath Mine meeting, on Monday, the accounts showed a credit balance of 3535l. The profit on the two months' working was 2519l. A dividend of 2844l. (8l. per share) was declared, and 671l. carried to the credit of next account.

At the Great Wheal Fortune meeting, on Aug. 7, the accounts for the three months ending May showed a credit balance of 2070l. 9s. 11d. The profit on the three months' working was 1692l. 6s. 3d. A dividend of 1348l. 10s. (15s. per share) was declared, and 721l. 19s. 11d. carried to credit of next account. Capt. J. Vivian, N. T. Miners, and T. George reported upon the various points of operation.

At Wheal Polmar meeting, on Wednesday (Capt. John Dalley in the chair), the accounts for four months ending April showed a credit balance of 492l. 10s. 5d. Capt. John Dalley and Wm. Rowe reported that a discovery had been made in the adit cross-cut, south of Lobb's shaft; they have cut a lode more than 3 ft. wide, and worth fully 20l. per fm. This promise well for their south ground, where they know there are several lodes, which run through the whole length of the sets, and have never been worked upon.

At the Harwood Mining Company meeting, held at Newcastle-upon-Tyne, yesterday, the accounts showed a cash balance of 91l. 10s. 5d. to the credit of the company; also lead ore on the floors of the value of about 80l. An offer of 320l. for a portion of the sets at present unworked stands over for consideration at the annual meeting, to be held in November next. The report, which is of a very satisfactory nature, appears in our usual column.

At West Wheal Frances meeting, on Aug. 7, the accounts showed a debit balance of 1172l. A call of 2l. 10s. per share was made.

At North Crofty four-monthly meeting, on Wednesday, the accounts showed a debit balance of 236l. 5s. 2d. A call of 1s. 6d. per share was made.

At the Atlas Mining and Smelting Company meeting, on Thursday (Mr. L. White in the chair), the directors were empowered to dispose of all the company's interest in Slade's Mead and Bovey Heathfield, and to lease or grant powers to work the company's iron ore on the Smallcombe estate, on such terms as they shall deem most advisable.

At the Brynmor Lead Mine meeting, on Monday (Mr. Edwards in the chair), it was stated that the total liabilities were about 1000l. It was resolved that the present company should be wound-up voluntarily, and that another company be formed forthwith, the present shareholders to have a corresponding interest, in fully paid-up shares, in the new company to that held in the existing company; and that another class of shares should be issued, of the nominal value of (say) 2l. per share, 5s. to be paid on application, and the remainder by 5s. instalments, at intervals of not less than three months, such shares to be entitled to a preferential dividend of 15 per cent.

At Charlotte United Mines meeting, on Aug. 7, the accounts showed a debit balance of 2201l. A call of 7s. 7d. per share was made.

At South Wheal Seton meeting, on Aug. 6, the accounts showed a debit balance of 624l. A call of 2l. 10s. per share was made.

At the East Wheal Martha meeting, on Wednesday (Mr. Wright in the chair), the resolution to wind-up the company voluntarily was confirmed.

At the South Seton Mine meeting, on Aug. 6, the accounts showed a debit balance of 622l. 10s. 1d. A call of 2l. 10s. was made. The agents' report was read, which stated that they had opened up several fathoms on the back of the lode at surface, about 100 fathoms east of the present workings. It is a large and well-defined lode, and worthy of trial; but they cannot commence the sinking a new shaft for the present, until they had cut the lodes in the 50 cross-cut, when they could better determine where the shaft should be sunk.

At the Bantary Bay Slime and Slab Company (first ordinary) meeting, on Thursday (Colonel Gamm in the chair), the accounts showed a balance of uncollected capital and arrears of call amounting to 3633l. The report and accounts were unanimously received and adopted. Details in another column.

At the Lower Taldra Slab (special) meeting, on Monday (Mr. Dendy in the chair), the resolution for increasing the capital of the company was unanimously confirmed.

At the Worthing Mine (S.A.) annual meeting, on Monday (Mr. R. Hallett in the chair), the accounts showed that the receipts during the past year from all sources had been 14,044l. 4s. 10d., while the total expenditure amounted to 14,491l. Details in another column.

At the Quebrada Land, Railway, and Mining Company first ordinary general meeting, to be held on Tuesday, the report to be submitted states that, as soon as possible after the formation of the company, the directors sent out agents to Venezuela to inspect the land and mines, whose reports completely proved, not only the agricultural capabilities of the estate, but that upwards of 30,000 tons of ore were at present discovered in the mines, capable of being extracted for 3l. per ton, and worth in this country, at the lowest estimate, 14l. per ton. Being satisfied with the correctness of these reports, the directors addressed their undivided attention to the attainment of such a mode of transit between the sea coast and the mines as would ensure a profitable realisation of this enormous supply of ore, leaving the development of the land as a secondary consideration. They have now the pleasure to state that, after many delays and difficulties, consequent on the peculiar circumstances of the case, they have effected a conditional contract with a gentleman lately engaged on similar works in Central America, embracing the following general conditions:—The construction of a locomotive railway from the sea near Tucacas to the mines (about 60 miles), to be completed in three years,

from Oct. 1, 1863, for an expenditure of 1800l. per mile, payable half in cash and half in shares of the company, of equal denomination to the ordinary shares at the date of each payment. The conveyance, during the period of construction, of 20,000 tons of ore from the mines to the company's ships, at 2l. 15s. per ton; not less than 5000 tons to be conveyed during the second year. The yearly conveyance during the 10 subsequent years of any quantity of ore at 1l. 10s. per ton. The payment of 5 per cent. interest on the paid-up capital of the company during the period of construction of the railway. Resolutions will be submitted to the meeting to authorise the issue of the shares required to carry out this contract. The vendors have agreed to defray the entire expense of the important and costly investigation of their title to the property. The Government of Venezuela has recognised the national importance of the company, and has granted most liberal concessions, including exemptions from duty during 30 years on all machinery and effects introduced for the purposes of the company, the exclusive right of navigating the rivers Arica and Tucayo, freedom from all military service or civil charge to all employees of the company, and a grant of 1500 acres of land for every mile of railway constructed suitable for passenger or goods traffic. A statement of receipts and expenditure from the commencement to June 30 shows a balance of assets over liabilities of 20,443l. 9s. 11d., since which date a further sum of 12,500l. has been paid on account of the purchase-money, and the company have been given possession of their estate. The directors do not anticipate any necessity for making a further call during the present year.

At the Petroleum Trading Company half-yearly meeting of shareholders, on Aug. 7, the directors reported that the result of the company's operations has been a profit of 23 1/2 per cent. per annum, out of which the directors propose to pay a dividend at the rate of 10 per cent. per annum, free of income tax, leaving a balance of 13 1/2 per cent. to be carried forward to the current half-year. The trade continues to increase enormously, as the following returns will show:—Exports of petroleum from the United States during the first half of the years 1863, 1862, and 1861: 1863, 17,066,049 gallons; 1862, 4,335,389 gallons; 1861, 130,683 gallons. The exports during the last six months, as compared with similar period of 1862, show an increase of 12,730,460 gallons; while those as compared with same period of 1861, an increase of 16,925,566 gallons.

At the Midland Wagon Company half-yearly meeting, on Wednesday, the directors reported that the results of the six months' transactions, with those of the previous half-year, shows that the revenue has increased from 24,740l. to 26,673l.; and the net profit from 9256l. to 9649l. The stock of wagons has increased from 4953 to 6179; while the company, and that source of security and profit to the company—has increased from 77,731l. to 83,374l., while 11,367l. 4s. has been added to the renewal fund, being an increase of 1353l. on the amount so appropriated last half-year. The balance at the credit of revenue, including the reserve carried forward, is 11,708l. 19s. 1d. The directors recommended a dividend at the rate of 10 per cent., with a bonus of 12s. 6d. per share on the ordinary shares, and a proportionate bonus on the amount paid-up on the new shares. The accounts show that after the payment of 10 per cent. and bonus of 2 1/2 per cent., and the entire liquidation of the preliminary expenses, 3128l. 10s. is carried over to reserve of revenue—the profit of the half-year, in fact, being equal to 15 per cent.

NEWCASTLE, AUG. 13.—The mining market has been active for West Chiverton, and a fair enquiry has been exhibited for North, Harriett, and North Crofty, but rather sellers of Wheal Grenville and North Keston. Harwood meeting was held to-day, but particulars have not come to hand as to how it has passed off. The improvements in the mine have compensated the shareholders who have held on through good and evil report, and there is little doubt that, with a judicious expenditure of capital, Harwood will take a good position. Tyne Head shares quiet; the mine continues to look well for improvements; the ground the man are driving in is extremely hard for progress at present.—EDWARD BREWIS.

LEEDS, AUG. 13.—In mining shares business has been limited; though active enquiries have been made for some descriptions of stock, yet few transactions have taken place; quotations remain with little variation. The Wensleydale Lead Mine has of late improved very much in Baghill low level, and they are bringing lead ore out in considerable quantity. At Wheal Prudence (St. Agnes) the works are carried on with great vigour, both night and day, under the superintendence of Messrs. Thomas, through whose management, and the able support given to them by the directors and shareholders, no expense has been spared in opening out the mine, levels, &c., and in the erection of two powerful engines for pumping and drawing, which are now fully at work. It is expected the mine will be drained next week, and put into full working operation by an able and efficient body of miners without delay. The powerful engines, pumping machinery, &c., are erected in a substantial manner upon a most magnificent and extensive scale, and the whole arranged and carried out with great engineering ability and practical skill, combining the newest appliances of science and art.

COAL MARKET.—On Monday, the arrival of 120 fresh ships gave a large quantity of house coal for sale, and caused a reduction of 6d. per ton in prices. Hartley's were scarce, at fully last quotations; manufacturers' without change. Best house coal, 17s. 3d. to 18s.; seconds, 15s. 6d. to 16s. 6d.; Hartley's, 16s. to 16s. 9d.; manufacturers', 12s. 6d. to 15s. per ton.—On Wednesday, there was a further arrival of 87 ships. House and manufacturers' continued in limited request, at Monday's prices. Hartley's were scarce, and 3d. per ton higher.—On Friday, there were 50 more ships arrived. All descriptions of coal continued in fair request, at last day's prices. Hutton Wallsend, 18s.; South Hutton Wallsend, 17s. 9d.; Tees Wallsend, 17s. 3d.; Russell's Hutton Wallsend, 16s. 6d.; Braddell's Hutton Wallsend, 16s. 6d.; Gosforth Wallsend, 15s. 6d.; Riddell's Wallsend, 15s. 6d.; Tanfield Moor, 12s. 6d.: 20 cargoes unsold; 80 ships at sea.

SALE OF MINE SHARES AT PUBLIC AUCTION.—Mr. T. P. Thomas sold by public auction, at Garraway's, on Thursday, the following mine shares, forfeited for non-payment of calls:—5 East Russell at 3l. 7s.; 10 Wheal Edward at 2l. 16s.; 20 ditto at 2l. 15s.; 10 North Buller at 4l. 15s.; 5 ditto at 4l. 17s.; 2 ditto at 4l. 19s.; 40 East Wheal Grenville at 3l. 5s.; 5 ditto at 3l. 1s.; 15 ditto at 3l. 1s. 6d.; 5 ditto at 3l. 2s. The following shares were also sold:—25 Great Retalack at 3s.; 5 Wheal Pollard at 4s. 3d.; 10 New South Caradon at 7s. 6d.; 10 Redmoor at 3s.; 5 Wheal Harriett at 3s.; 25 Stridgate Consols at 6s.; 75 ditto at 6s. 9d.; 10 25s Carnarvon at 5s. 6d.; 25 West Penwith at 6s. 6d.; 7 Calveadack at 6s. 10d.; 10 East Carn Brea at 7l. 17s. 6d.; 1 East Bassett at 79l. 10s.; 4 ditto at 79l. 15s.; 1 Mount Pleasant at 11l. 5s.; 20 North Robert at 13s.; 2 West Caradon at 23 1/2l.; 1 ditto at 23 1/2l.; 1 ditto at 23 1/2l.; 40 Tamar Consols at 10s.; 5 St. Just United at 3l. 2s. 6d.; 5 ditto at 3l.; 5 North Bassett at 3l.; 20 East Margaret at 8l.; 1 Wheal Bassett, 61l.; 1 ditto at 61l.; 5 Spearhead Moor at 35l.; 5 Trellyn Consols at 12l.; 5 South Carn Brea at 2l. 10s.; 5 ditto at 2l. 12s. 6d.; 5 Wheal Hearle at 17l.; 1 South Tolgus at 37l. 10s.; 100 North Minera (pref.) at 6s. 9d.; 20 Wheal Caradon at 30s.

Mr. Thomas then submitted for sale the Lady Eliza sets, in one lot, which was knocked down for the sum of 804l. Great North Tolgus, together with the whole of the machinery, &c., was the next lot offered, and was knocked down for 1000l. The sale was well attended, and the biddings throughout of a spirited character; the reserved price on many of the lots offered—in all cases far beyond the market price—prevented them being sold, and caused disappointment to several who attended, and would have been purchasers.

THE QUEBRADA LAND, RAILWAY, AND MINING COMPANY.—The purchase of this property has been at last completed, and the company have now possession of 250,000 acres of freehold land, containing rich mines, not only of copper, but of gold, silver, lead, and iron. A very favourable contract has been entered into for the construction of the railway from the mines, and 5000 tons of ore are to be brought down the same year, which will leave a large profit for dividends. In the meantime sufficient timber has been sold along the line of railway to at once pay dividends of 5 per cent. on the capital called up.

NOUVELLE MONTAGNE MINING AND SMELTING COMPANY.—The Council of Administration have just issued a circular announcing, with regret, the resignation, in consequence of the state of his health, of Mr. Victor Simon, who has so ably fulfilled the duties of Director-General ever since the establishment of the company. The Council, however, desirous of continuing to profit by his experience, and as a mark of appreciation of his faithful services, have hopes that he will accept the less active duties of an administrator. Mr. Victor Bouhy, of Engis, has been appointed the Director-General, and entered upon his duties on Monday last.

APPOINTMENTS.—There is a rumour that the Attorney-General, Sir W. Atherton, will fill the vacancy created on the bench of the Court of Exchequer by the appointment of Baron Wode to the Divorce Court; that Sir Ronnell Palmer will, as a matter of course, take the office of Attorney-General; and that Mr. Collier, Q.C., will be the new Solicitor-General.

THE GREAT EASTERN RAILWAY.—Mr. James Goodson has been elected the chairman, and Capt. Henry J. W. Jarvis, M.P., the deputy-chairman, of the board of directors of this company.

FORTUNATE ESCAPE.—While exploring the workings of the Cyan Penar Colliery, near Duffryn, last week, Mr. Bruce, M.P., Mr. Bruce, their eldest son, and the Countess Telet (daughter of the late Lord Langdale), who was on a visit to them, had a narrow escape from being killed. Part of the roof fell in not far from the spot where they were standing. One of the colliers, a man aged 60 years, was killed on the spot, a second had his leg broken, and a third his arm. As may be supposed, the unfortunate accident caused the visitors much consternation.

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for June is 29. They have consumed 1584 tons of coal, and lifted 12-6 million tons of water 10 fms. high. The average duty of the whole is, therefore, 53,800,000 lbs. lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Mines.	Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
West Beam .....	10 10 0	8 1/2	84 4 0	Truro Co.
Sold on the 29th July.				
East Lovell .....	5 17 0	10 1/2	57 1 0	Chyandour.
ditto .....	2 8 0	13 1/2	24 0 0	ditto.
Trevellick .....	5 10 0	11 1/2	57 1 0	ditto.
ditto .....	0 9 8	11 1/2	10 11 0	ditto.
Sold on the 6th August.				
Leeds & St. Aubyn .....	4 1 0	11 1/2	46 1 0	Chyandour.
Sold on the 8th August.				
Bottle Hill .....	1 10 0	0 8 1/2	8 10 0	Charlestown.
ditto .....	1 10 0	0 8 1/2	8 10 0	Truro Co.

## BLACK TIN.

Mines.	Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
West Beam .....	10 10 0	8 1/2	84 4 0	Truro Co.
Sold on the 29th July.				
East Lovell .....	5 17 0	10 1/2	57 1 0	Chyandour.
ditto .....	2 8 0	13 1/2	24 0 0	ditto.
Trevellick .....	5 10 0	11 1/2	57 1 0	ditto.
ditto .....	0 9 8	11 1/2	10 11 0	ditto.
Sold on the 6th August.				
Leeds & St. Aubyn .....	4 1 0	11 1/2	46 1 0	Chyandour.
Sold on the 8th August.				
Bottle Hill .....	1 10 0	0 8 1/2	8 10 0	Charlestown.
ditto .....	1 10 0	0 8 1/2	8 10 0	Truro Co.

## LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
North Laxey .....	12	£18 3 0	Sims, Williams, & Co.
Sold on the 8th August.			
Minera Union .....	15	12 10 0	Sims, Williams, & Co.
Sold on the 18th August.			
Macayrerridn .....	73½	13 11 0	Newton, Keates, & Co.
Costa Liza .....	78½	14 5 0	Walker, Parker, & Co.
Deep Level .....	10½	13 3 6	ditto
Rhodesmor .....	78	13 1 6	A. Eytton.
ditto .....	73	13 1 6	ditto
Parry's .....	34	13 5 6	Walker, Parker, & Co.
Bryn Gwlog .....	50	13 4 6	ditto
Long Lake .....	20	13 0 6	Newton, Keates, & Co.
Speedwell .....	9	12 1 6	ditto
Holywell .....	8	14 11 6	Walker, Parker, & Co.
Merilyn .....	2	13 10 6	A. Eytton.
Garreg .....	2	12 15 0	Newton, Keates, & Co.
Llangyng United .....	20½	13 1 0	ditto
ditto .....	20½	13 1 0	Walker, Parker, & Co.
Llanerchyr .....	14	13 1 0	Newton, Keates, & Co.

## COPPER ORES.

Sampled July 22, and sold at Swansea August 11.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Berehaven .....	75	10	23 2 0	Knockmahon .....	80	11 1/2	29 7 0
ditto .....	78	10 1/2	23 3 6	ditto .....	43	11 1/2	29 10 0
ditto .....	95	11 1/2	23 11 6	Chill .....	65	17 1/2	15 4 6
ditto .....	77	10 1/2	23 7 6	ditto .....	64	18 1/2	15 14 6
ditto .....	131	11 1/2	23 12 0	ditto .....	62	18 1/2	15 18 6
ditto .....	80	11 1/2	23 12 0	ditto .....	62	18 1/2	15 18 6
ditto .....	71	11 1/2	23 11 6	ditto .....	60	25	21 18 0
ditto .....	105	11 1/2	23 14 0	ditto .....	35	27	23 15 0
Cobbe .....	93	12 1/2	10 1 0	ditto .....	17	23 1/2	19 9 0
ditto .....	92	12	10 1 0	French Slag .....	28	10 1/2	7 14 0
ditto .....	91	12 1/2	9 16 0	Cape Copper .....	24	38 1/2	33 10 6
ditto .....	100	12 1/2	10 6	New S. Wales .....	11	11 1/2	9 9 6
ditto .....	10	12 1/2	23 15 0	Son. Australia .....	5	30 1/2	25 16 0
ditto .....	37	23 1/2	23 15 0	Black Copper .....	5	25 1/2	21 11 6
Knockmahon .....	100	11 1/2	9 16 0	Reading .....	5	25 1/2	21 11 6
ditto .....	90	11 1/2	9 17 0	Union .....	2	21 1/2	18 18 0
ditto .....	95	10 1/2	8 19 0				

## TOTAL PRODUCE.

Berehaven .....	712	£5698 13 0	New South Wales ..	11	£104 4 6
Cobbe .....	509	5784 10 0	South Australia ....	5	129 0 0
Knockmahon .....	408	3573 5 0	Black Copper .....	5	237 17 6
Chill .....	366	6402 3 0	Reading .....	5	16 15 0
French Slag .....	28	215 12 0	Union .....	2	37 16 0
Cape Copper .....	24	804 12 0			







should lend a willing ear to the sophistries and misrepresentations addressed to them, and return a verdict which exonerates the owners and managers from blame, renders the law ineffective, and publishes to the world the startling fact that, notwithstanding the humane intentions of the Legislature, the Inspection Act is a failure, so far, at least, as its protective penalties are concerned.

The average annual loss of life in coal mines has not been diminished by the Inspection Acts; and so long as 50 or 100 men can be destroyed with impunity, it is in vain, as sorrowful experience tells us, to expect that the expenditure of money will be made which is requisite in many cases to ensure the safety of the workmen. Our columns during the last few years have borne ample evidence of the truth of what we have stated, and our readers will have no difficulty in calling to mind numerous instances confirmatory of the opinions we have expressed. Indeed, the alleged facts are too notorious to be called in question.

The loss of about a thousand human lives every year in our coal mines is disgraceful to the country, and loudly demands the serious consideration of the public; for it is to public opinion and the press that the miners must look for a remedy to this appalling evil. The Government and Parliament will not trouble themselves with such a subject until compelled by the urgent remonstrances of the people. Both the Secretary and the Under-Secretary of State for the Home Department are representatives of towns in coal mining districts, and the latter gentleman is, we believe, an extensive proprietor or lessor of collieries. We cannot, therefore, expect them to be so quixotic as voluntarily to run the risk of offending their most influential constituents, or imperilling their private interests by any efforts at renewed legislation, so long as the public voice is silent.

It cannot be too often or too loudly repeated that 1000 men are annually killed in our mines, and that the majority of the fatal "accidents" arise from preventable causes. Another important fact is that the present law has not diminished this awful destruction of human life. The Inspection Acts have been in operation 12 years, and yet the violent deaths in mines are as fearfully numerous now as they were before the first Act was passed. Surely this is proof sufficient of the utter inadequacy of the means employed to accomplish the object contemplated.

It is for the public to say whether or no such a state of things is to continue. No efforts ought to be left untried to remove this monstrous human sacrifice, which we repeat is a national disgrace, and is as bad in policy as it is repulsive to christianised civilisation. We earnestly invite the co-operation of all "good men and true," and hope that during the present parliamentary recess the subject will receive such attention and discussion as to force the consideration of it upon Her Majesty's Ministers and the Legislature, so that some really efficient law may be enacted in the next Session of Parliament.

#### COAL-CUTTING BY MACHINERY.

An improved coal-cutting machine, invented by Messrs. Robert Ridley and Jones, has just been completed at Mr. Middleton's factory, in Loman-street, S.; and on Saturday last we took the opportunity of inspecting it at work, the cutting upon this occasion being made into a solid block of freestone. The size of the machine is about equal to that of a full-sized trunk, being about 3 ft. long, 1½ ft. wide, and 2 ft. high; it has flanged wheels, to run on the ordinary pit tramway, and weighs about ½ ton. Motion is given to it by a 6-inch cylinder high-pressure engine, the pick being connected with the end of the piston-rod, and by varying the mode of connecting, the blow may be given either right-handed or left-handed. There is an arrangement for regulating the depth and force of the blow, precisely similar to that used in the steam-hammer; and as the attendant has his hand constantly upon this regulator whilst the machine is at work, the precision obtained is fully equal to anything that could be obtained by hand labour. Indeed, the collier directing the machine must use precisely the same amount of judgment as if he were using an ordinary pick; the principal difference being that he is enabled to strike five blows with the machine for one blow with the hand.

With respect to the efficiency of machines upon which this is considered to be an improvement, we cannot do better than state the results recorded by Messrs. Daglish and Wood, in their paper read before the North of England Institute of Engineers, as obtained in actual practice with Messrs. Donisthorpe, Firth, and Ridley's machine, at the West Ardsley Company's Balacava Colliery, near Leeds. Working long wall, a kiring 35 yards long and 37 in. deep, was made in 2 hours 45 minutes, including all stoppages; and in a subsequent experiment, a kiring 43½ yards long and 37½ in. deep was made in 2 hours 37 minutes, so that at the mean practicable working speed it would appear that a yard can be cut in about 4 minutes. A kiring of the depth mentioned would be made at three cuts; the first going in about 16 inches, and the two subsequent cuts about 10 or 11 inches each. In these experiments the speed of the blows averaged about 40 per minute, but the machine just completed gave 15 in 10 seconds, so that it is probable 60 per minute could readily be given in the pit. As compressed air is used instead of steam, the difficulties which have prevented the success of several of the machines which have been introduced do not exist, whilst the price of the machine being considerably under 1000, and its liability to get out of order is very small, it cannot fail to be very generally adopted as soon as the amount of economy which it effects becomes generally known.

**UTILISATION OF BLAST-FURNACE SLAGS.**—At a recent meeting of the Manchester Geological Society an interesting paper was read by Mr. J. Plant, "On the Effect produced on Rowley Rag by Heat, and the Practical Application of its products to useful purposes." The Rowley Rag is a melaphyre, and intermediate between ordinary greenstone and black basalt, of dirty greenish brown, hard and tough in a fresh state, and of the specific gravity of 2.85. It is composed of silica, 55; alumina, 25; oxides of iron and manganese, 12; lime, 8; soda, 6; and inappreciable amounts of potash and magnesia. Mr. Plant carefully traces the several inventions which have from time to time been introduced for converting the Rowley Rag into a kind of artificial obsidian, concluding with a reference to Messrs. Chance and Adcock's patent for casting articles from the slags of blast-furnaces. As almost all that relates to the treatment of Rowley Rag would be capable of application, with trifling modifications, to the treatment of blast-furnace slags, too much importance cannot be attached to Mr. Plant's paper, even if it does no more than revive the consideration of the subject. The paper was followed by an animated discussion.

**THE VALUE OF MEXICAN MINING SHARES.**—(From a Correspondent.)—A most unfair attempt having been made to give one class of Mexican mining shares a higher value in the British market, to the prejudice of the other class, it may be well to point out the true position of the two classes of shares—the *barras aviadadas* and the *barras aviadoras*. The Mexican *ordenanzas de mineria*, or mining code, considers every mine denounced (that is, claimed for working) to consist of 24 *barras*, or shares, and the whole of these *barras* belong to the explorer who denounces the mine; these are *barras aviadadas*. If the owner (he who has denounced the mine) has no capital, he at once proceeds to dispose of a certain number to those who are willing to provide the cash for developing the mine; the *barras* so disposed of become *barras aviadoras*, or capitalists' shares, and the holders of them are entitled to receive back their advances, without interest, out of the first profits from the mine. The *aviadoras*, or capitalists, must continue to find money until the mine becomes profitable, for if their capital be absorbed, or they decide to cease working, they must restore the mine, in good working order, to the owners of the *barras aviadadas*. The two classes of shares are in somewhat the same position with respect to each other as shares liable to call and paid-up shares in an English limited company. If you hold a paid-up share (*una barra aviada*) you have the chance of gain without the possibility of loss; if, on the other hand, you hold a share liable to calls (*una barra aviadora*), you must pay the calls as made, or forfeit what has already been paid. The holder of a *barra aviada*, however, receives back the property in case of failure or abandonment, which the paid-up shareholder does not. In a progressive mine not paying cost, the *barra aviada* is, consequently, the most valuable; during the time that the mine is returning the capital expended in developing it the *barra aviadora* has the best of it; and as soon as the capital is repaid both classes of shares are equal. This is theoretically, practically the value of all the shares in a mine may be considered equal at all times, because the relative proportion of the *aviadas* and *aviadoras* is fixed by the contracting parties, and usually in proportion to the chances of success. The owner endeavours to obtain the capital for as few *barras* as possible; the capitalist endeavours to obtain the largest possible number of *barras* for his money. Suppose a mine is estimated to require 18,0000, to put it in a paying position, and the owners and capitalists agree that there shall be 18 *barras aviadadas* and 6 *barras aviadoras*, the capitalists may, if the mine costs rich soon, get their three-quarters of the mine for 60000, or less, or they may

have to pay thrice 18,0000, for that same three-quarters of the mine; but the holders of the *barras aviadadas* will receive their one-fourth of the aggregate profits after the money expended has been returned, whether the outlay was 60000, or 60,0000. The only possible time at which the *barras aviadoras* can be worth more than the *barra aviada* is during the period that the mine is in a transition state from a losing to a paying concern; but it will be obvious that there are more cases than one in which the *barra aviada* would be undoubtedly the more valuable class of share.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

Aug. 13.—There has been a good demand for ships on the Tyne during the last week, and freights continue to advance. Baltic and Mediterranean rates are improving. At Hartlepool, the rates of freight are also firm. The chemical trade of the Tyne continues good, and prices are decidedly firmer. Prices are, for assorted casks 4½ 7s. 6d. to 4½ 10s. per ton; export casks, 4½ 5s. per ton; bicarbonate soda, 11½ to 12½ per ton; bleaching powder, 9½ to 9½ 10s. per ton. The projected works of Messrs. Tennant, of Glasgow, who intend to erect and work extensive chemical works on the Tyne at Hebburn, are expected to be commenced very shortly. The various plans are in preparation by a well-known architect of Newcastle. The Coal Trade still suffers depression in various branches. At many of the large steam and house coal collieries the demand keeps them going little more than half time. There are some exceptions to this, but it is certain that it applies to too many of them. The gas and coking coal collieries are doing better, many of them being fully employed.

The local railways and ironworks keep the coke collieries pretty well employed, as so far the iron trade continues to sustain its position, and even to extend, while none of the local railways have as yet substituted coal for coke in the working of locomotives. The North-Eastern Company, on its main route and numerous branches, the North British, and other local railways, all continue to consume coke exclusively. This can hardly excite surprise, as coke is abundant and cheap throughout the district, while coal suitable for locomotive consumption is comparatively very scarce. The exact reverse of this state of things exists in the Southern and Midland districts, which accounts for the use of coal on many of the principal lines of railway there. The Elswick Colliery, near Newcastle, continues to extend and prosper, the workings having now reached a considerable extent. A new shaft is to be sunk, so as to communicate with them. The works are at present carried on by means of one large shaft, which is bratticed. The sinking of the new shaft has been let to a well-known contractor in this kind of work, Mr. William Fryer, of Gateshead, and it is to be commenced with immediately. The depth to be sunk is about 100 fms. The iron shipbuilding trade continues to progress most satisfactorily on the Tyne and the other principal north-eastern ports; and one particular branch of this trade is the building of screw-ships for the carrying of coal. Great attention is paid to this branch of the trade, and many ships of this class are building. Indeed, many look to this as almost the only means open for permanently improving the northern coal trade, as it will afford the means of cheap and rapid transit for this coal to the continental ports, where the northern coalowner can, without doubt, compete with any coal which can be produced. The rapid increase of iron ships propelled by steam must, however, alone improve the demand for steam coal, of which a plentiful supply will be forthcoming at the northern collieries for many years to come.

The British Association for the Advancement of Science commence their proceedings on Wednesday, the 26th inst., when the first general meeting will be held in the Town Hall, and the Rev. Robert Wills, M.A., F.R.S., will resign the chair, after which Sir W. G. Armstrong will assume the presidency and deliver an address. The local, executive, and general committees in Newcastle are making ample preparations for the meeting of the association, and the distinguished members from a distance who will attend the meeting will be entertained with unbounded hospitality by the northern people. The following gentlemen have been chosen presidents of sections:—Mathematical and Physical Science: Mr. W. J. Macquorn Rankine, C.E., LL.D., F.R.S., professor of engineering in the University of Glasgow; Chemical Science: Mr. Alexander W. Williamson, Ph.D., F.R.S., professor of chemistry in University College, London; Geology: Mr. Warrington W. Smyth, M.A., F.R.S., F.G.S., professor of mining and mineralogy at the Royal School of Mines, London; zoology and botany, including physiology, Mr. J. Hutton Balfour, M.D., professor of botany in the University of Edinburgh; geography and ethnology, Sir Roderick I. Marchison, K.C.B.; economic science and statistics, Mr. Wm. Tite, M.P., F.R.S.; mechanical science, Prof. Willis, of Cambridge. Among the more interesting features of the meeting, it is anticipated, will be found the reading of papers descriptive of the great branches of industry in the district, such as coal mining, the glass and iron trades, iron shipbuilding, &c.; and the excursions, which will be to the iron district of Cleveland, where the party will be entertained with magnificent hospitality by the ironmasters of Middleborough; to the lead mines of Mr. W. B. Beaumont, M.P., at Allanheads; to the Northumberland lakes, and the Roman wall, to South Shields, Sunderland, and to Seaton Delaval, and other large collieries in the district. There will be an extensive exhibition of works of art and science held in the Central Exchange Rooms, the Mayor of Newcastle will give a grand concert, and there will be several balls and other gaieties during the week of the association's meeting. Sir William Armstrong will also make several great gun experiments upon Whitley Sands on one of the days of the meeting. A meeting of the general local committee was held at the Literary and Philosophical Association on Saturday, the Mayor in the chair. It was attended by Mr. Ingham, M.P., Mr. S. Beaumont, M.P., and a number of influential manufacturers. Mr. Griffith, the general secretary of the association, was present, and he expressed himself highly pleased with the arrangements made by the executive committee for the meeting.

At the North of England Institute of Mining Engineers annual meeting, held in their rooms, Neville Hall, Newcastle, Mr. Nicholas Wood (President) in the chair—the financial report showed an expenditure in excess of income, owing to the expense of printing a supplementary volume of the Transactions of the Birmingham Meeting, and reprinting Volume II. Several new members were elected. The officers for the ensuing year were also elected. Mr. Wood was re-elected president, and Mr. Thomas Doubleday secretary. Mr. Howe, of South Shields, was appointed to take charge of the library and fossil of the institute to edit the papers, &c., at a salary of 350 per annum. Some alterations were made in the rules, by which persons who are studying for the profession of a mining engineer may be admitted to the privileges of membership, under the term "graduates," on the payment of an annual subscription of 11. 1s.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

Aug. 13.—The misfortune of one generally benefits another, and the analogy is true, to a great extent, as to the present state of the Iron Trade of this district. The unfortunate dispute between the South Staffordshire ironmasters and their puddlers has, without doubt, been the source of great loss to both employers and employees in that once prosperous locality, and the mischief and injury of a few months will often take years to repair. I fear that South Staffordshire will find such to be the case in the instance under notice, and it is not surprising to see some of the makers evincing a disposition to accede to the terms of the men rather than let orders go to other districts. On the other hand, it is quite clear that the current quotations for iron will not admit of an advance to the puddlers, as they were paid before the turn-out 6d. per ton more than is usual in proportion to the price of iron. Certainly other districts are reaping a considerable benefit through the stoppage in South Staffordshire, and South Wales has had a full share of the orders which would otherwise have found their way to that country. This fact is proved by the improvement in quotations for the last two or three weeks, and the firmness with which the current prices are held. The orders in hand enable the ironmasters to keep the works regularly going, and even if the present circumstances in Staffordshire did not exist, the iron trade of this district would be in a fairly satisfactory state. Within the last three or four days prices are not quite so firm, and buyers are holding back, but makers decline to take orders at lower rates, and unless some unforeseen event should occur, it is more than probable that buyers will have to submit to the ruling quotations.

The Coal Trade shows increased activity, and large shipments are taking place. The returns of the exports for the month of July from Newport, Cardiff, Swansea, Llanelly, and Neath, are decidedly satisfactory, and as compared with the corresponding month there is a very large increase. This fact indicates a return of better times for the coal trade, and the coalmasters express confidence in the future. Prices are firmer, and there is a prospect of an advance.

On Saturday a case was heard before Mr. Fowler, the stipendiary magistrate for the Merthyr district, and the decision shows that the local magistrates are at last determined to carry out the spirit of the law as regards colliery offences. Henry Hendri was summoned by Mr. John Thomas, manager of the Little Duffryn Pit, for neglect of duty and infringement of the colliery rules, by not keeping a proper supply of water in No. 6 boiler, in consequence of which the boiler burst. Defendant was the stoker, and it was his duty to see that a proper supply of water was always kept in the boilers. The offence was clearly proved, and it appeared that it was sheer neglect on the part of the defendant. If he had tried the gauge cocks every half-hour, as he should have done, he must have found out the want of water, and if cold water had been turned into the boiler just before its state was discovered, it was impossible to calculate what loss of life might have occurred. There were about 120 hands at work close by. Mr. Fowler remarked that he could

not pass over such a serious offence lightly, and defendant was committed for twenty-one days with hard labour.

The opening of the Bristol and South Wales Union Railway is being looked forward to with great interest, as the new route will materially diminish the distance between Bristol, the West of England, and South Wales. The 19th inst. has been fixed for the formal opening, and it is expected that passenger and light goods traffic will be commenced in two or three days after. The Great Western Company are to work the line, and will very probably become the future lessees. The Milford and Johnston line was opened on Friday, and the unequalled harbour of Milford Haven has now a direct railway communication with all parts of the kingdom. The advantages which the port of Milford possesses as regards safety, depth of water at all times, protection from gales, and many other matters which might be named, are so well known and acknowledged, that it is unnecessary to dilate further upon them. To secure that commercial importance which Milford is entitled to, two things are indispensably necessary—the extension of the narrow-gauge to the port, and the establishment of large and extensive docks. The latter point is in a fair way of being realised, as a bill was obtained during last session with the view of carrying this project into effect, and it only remains for the Great Western to lay down a narrow-gauge rail on the South Wales line, and then there is no doubt but that Milford will see such a period of prosperity as has never been known before in the history of the port. The recent amalgamation of the West Midland and Great Western gives some hope that the narrow-gauge will be more generally adopted, and if this policy should be carried out the shareholders and the public will, without a doubt, be materially benefited.

The half-yearly meeting of the Llynvi Valley Railway Company was held on Friday at the Great Western Hotel, Paddington, Mr. Macgregor in the chair. Mr. G. J. Saunders, the secretary, read the report, which stated that the gross revenue for the half-year amounted to 9374, and the working expenses to 5130. The net income, after deducting working expenses and interest on the debentures and on land purchases unpaid, amounted to 4243. The amount required for payment of the dividend at the rate of 5 per cent. upon the first and second preference shares was 3576, leaving a balance of 667, available for distribution among the holders of ordinary stock, and in order to enable the proprietors of that stock to receive a dividend of 4 per cent. it would be necessary to take 7211 from the reserve fund, which would then be reduced to 5467. The directors had made arrangements by which all litigation with the principal traders on the line had been terminated. The report was adopted, and the dividends recommended were agreed to.

The Taff Vale Railway Company propose paying a dividend at the rate of 9 per cent. per annum for the past half-year. This is the largest dividend paid by any other railway company during the half-year.

The arrivals at Swansea include—The Clarence, from Antwerp, with 160 tons of fire-clay, for Vivian and Sons; Alma, from Borgo, with 15 tons of plumbago, for the captain; Ralph, from Cherbourg, with 180 tons of iron ore, for the Downia Iron Company.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Aug. 13.—The Puddlers' Strike, which has now lasted for nearly five months, continues much as it was. Notices for the advance have been given at three or four additional works, and the men are evidently straining every resource to secure their object before the fine weather and the harvest are past. At the present moment there is any amount of work in the harvest fields, so that the pinch is as little felt as is conceivable under the circumstances. The masters insist that they are giving 6d. per ton above the scale which has ruled for many years, as to which there can be no doubt, and the real reason why the puddlers have struck is that the price of iron, and with it the rate of payment for puddling, have continued low for so long a period, which is the result of the competition of new districts, to which, by the way (and this is an important element in the question) a great number of the men have been attracted. There can be no question that the ironmasters of Staffordshire have greater difficulty at this moment in paying the present rate of wages—7s. 6d. per ton—than they have had in paying 10s. at other periods.

The demand for finished iron is good for those who can produce it, and for sheets, hoops, and plates many of the masters have orders on hand from five weeks to two months, a state of things which has not existed for a long time previously. The termination of the strike would, however, soon change this state of things, as the make would be at once increased by fully a third. Pig-iron keeps dull of sale. For best qualities of hot-blast the price is 31. 5s. to 31. 7s. 6d., descending from that amount to 21. 10s., and even a shade lower. The Hardware Trades of Birmingham and South Staffordshire are, as a rule, moderately active.

The permanent distress amongst the silk weavers of Coventry has induced Lord Leigh, the respected Lord-Lieutenant of Warwickshire, and a number of influential gentlemen, to start a company for introducing the woollen manufacture into that town. It is an effort which promises to and deserves to succeed.

Mr. Molyneux, whose first paper "On Cannon Chase and its Collieries," caused subsequent ones to be desired, announces a work on "The Coal Fields of North Staffordshire." The ground is almost untrdden, and the great attention Mr. Molyneux has bestowed on it, especially in his researches, which are to be embodied in a paper he has been engaged to read at the forthcoming meeting of the British Association, give promise of a very complete and very interesting work.

A meeting in connection with the North Staffordshire and North Wales Amalgamated Miners' Association was held yesterday week, in the open air, at Hanley, in the Staffordshire Potteries. It was convened as a "mass meeting," and previous to the proceedings a number of the promoters perambulated the streets, headed by a band. Fairly owing to the rain, however, only about 200 persons were present. Mr. T. Hickman, of Kidsgrove, was called upon to preside, who, after making a few remarks, called upon the secretary, Mr. Jones, of Kidsgrove, secretary to the North Staffordshire Miners' Association, to address the meeting. Mr. Jones referred to the successful steps taken by the association to raise the wages of the working miners of the district during the last two years. He also stated that in the course of that time the association had paid to sick members the sum of 12900, 6s. 3d., at the rate of 8s. per week to each recipient; and for death money 1821, at the rate of 100, for a member, and 50, for a member's wife. He remarked that a great number of the cases of an agricultural labourer, have had to apply for parochial relief, and urged that such results having been obtained from their own unaided efforts, they ought to take courage, and to cultivate more persistently the principle of self-help. Mr. J. Towers, of London, the editor of the "Miners' and Workmen's Advocate," delivered an address on the subject of unity amongst working miners. In his remarks this speaker referred to the fact that in this country there are about 300,000 miners, with about 1,500,000 people depending upon them; that of this number there were 1000 killed annually, and 10,000 injured, more or less, by their occupation; that 27 years was the average of a miner's life; and that a miner's wife became a widow 15 years sooner than the wife of an agricultural labourer; and that 68 per cent. of the miners in excess of the general population died annually, in consequence of breathing an impure atmosphere. He also referred to their liability to catastrophes like those which had occurred at Hanley and other places within the last few years. From these facts he urged that they, as a body of working men, should endeavour to raise their social and moral condition; that they should combine legally and peaceably to carry out their purposes; and that they should endeavour to make their children better men than themselves by education. In the course of his speech he said the strike system, as a rule, had done more harm than good, although in certain cases, perhaps, it might have been beneficial. He considered that the present system of surveying, under the Mine Inspection Act, was defective; he thought that there ought to be appointed as inspectors a sufficient number of practical, experienced, men who thoroughly understood the working duties of miners, instead of a few gentlemen who were only theoretically acquainted with them.—Mr. B. Smith, who attended as a deputation from the North Wales Association, stated that during the last six months 14 lodges had been opened in that district, with 1400 members, and the movement was growing more popular every day. Judging from the tone of the speeches, the objects in view are very laudable, though evils may, as in all cases, be mixed up with the good. It is of great importance that the miner should be led to think and act with regard to the future, instead of drifting on merely from day to day.

The members of the Institute of Practical Engineers, who held a four day's congress at Liverpool on Friday, visited the monster railway works at Crewe. They first visited the rail works, where they witnessed the whole process of rolling Bessemer steel rails from the ingot to the finished rail. Mr. Bessemer was present, and accompanied the party through the works. In the forenoon a luncheon was served in the hall of the Mechanics' Institution, at which Mr. Ramsbottom, the superintendent of the London and North-Western Railway, presided. After the repast, Mr. Ramsbottom, a well-known mechanical engineer, proposed the health of Mr. Ramsbottom, with whom he had worked in early life. Mr. Ramsbottom reported that, the party afterwards proceeded in their inspection of the works. All the various departments were visited. The patent safety-valves and the new travelling cranes, the invention of the superintendent, were exhibited and explained by Mr. Ramsbottom and Mr. Webb, the manager. The cranes, worked by steam, carried an engine weighing 30 tons either transversely or longitudinally, and raised and lowered it with the greatest ease. There were also smaller steam-crane shown running on a single rail. The party had travelled from Parkgate and Liverpool by special train, and after the inspection the greater part returned by the "special" to Liverpool. They all expressed their acknowledgments to Colonel Clay, the President of the society, and Mr. W. Stabb, C.E., honorary secretary, and to the local committee, for the arrangements made for the Congress, which is said to have been the most successful one yet held.

#### REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

Aug. 13.—Excessive dullness continues to characterise the Iron Trade, and notwithstanding that merchants look hopefully for an improvement, the return of the trade to a state of activity appears to be as distant as ever. There has been a greater demand for manufactured iron from the Continent during the week, and some large orders have been received by several Yorkshire houses. Heavy ironwork is most in demand, and we continue to experience a steady enquiry for rails, but there is nothing to indicate activity. Pig-iron is dull, and the rates very unsettled. Much excitement now prevails in South Yorkshire in reference to the recovery of the bodies of the unfortunate men who have been entombed for so many months. There is a prevalent opinion that there ought to be a further enquiry than that which was made by the coroner, and in accordance with that view a memorial has been addressed to the Lord Chief Justice, asking him to cause a further enquiry. The Associated Engineers of South Yorkshire are also in favour of the movement. The South Yorkshire Railway Company have recommended a dividend of 5 per cent. They also explain their reasons in the report just issued why they withdrew their late bill for leasing the line to the Sheffield Colliery Company, which was opposed by the coal-owners. The Coal Trade is still very dull, and so difficult is it for some small owners to do a trade that they accept almost any terms in order to keep their works going. The underselling system is increasing, and there is nothing that will check it but its own remedy. There was to be an allotment of shares in London on Wednesday in the Whittington Colliery Company. We hear they have been well taken up.

The Grosley Wood and Swadlincote Collieries are about to be worked



by a limited company, with a capital of 100,000l., in 20l. shares, of which only one-half is to be issued at present. The collieries are estimated to contain 20,000 tons of coal to the acre, the seams varying from 4 feet to 13 feet in thickness. They are estimated to be capable of an output of 500 tons per day, and it is estimated that 15 per cent. profit will be realised. The direction is composed of local gentlemen, with the exception of Mr. Hankey, of Old Broad-street.

Two colliery accidents have occurred in the neighbourhood of Chesterfield during the past week. At the Hunger Hill Pit, belonging to the Wingerworth Company, John Hester received on Saturday morning a compound fracture of the skull, of which he afterwards died. The men were descending in the cage, when the chain tipped, and precipitated them to the bottom. The inquest is adjourned until Monday. Two other men were injured, one severely and one slightly. At the Chesterfield and Midland Silks Company's Colliery, on the same day, Edward Cook was killed by a fall of roof.—Verdict, "Accidental Death."

There is nothing new to notice in the lead mining district of Derbyshire. The failure of the North Derbyshire Mines has put a damper on new undertakings.

#### MINING IN THE ARGENTINE REPUBLIC.

Although the title—"A Mining Journey across the Great Andes"—might prove less attractive to the general reader than many others that could have been chosen, we have no hesitation in stating that Major Rickard's book is written in a very attractive style; and that it is well calculated to impart to the reader a fair knowledge of the character and peculiarities of the country, and at the same time to direct attention to the mineral riches of the Tontal district, and to induce the British capitalist to embark in the development of its mines. The author of the work in question was well known to many readers of the *Mining Journal* during his Cornish career; and some six years since he received an appointment to go out to Chili; and it was upon the termination of this engagement that the narrative contained in the "Mining Journey across the Great Andes" commenced. Being about to return to Europe, he received an offer from the Government of the Argentine Republic to enter its service as Inspector-General of Mines.

To reach the seat of his new duties, a journey across the Andes became necessary; and it is this journey that forms the subject of the book. The first district to which Mr. Rickard directed his attention was that of Tontal, which extends over 90 miles. He observes that the geological formation may be considered one of the best for silver—clay-slate, and in some parts kyllas, grauwacke, &c., together (further south) with some of the best silver-bearing igneous rocks. The ore contains a fair quantity of metallic callos, or silver ore which is capable of amalgamation without calcination. One hundred samples gave an average yield of 168 ozs. to the ton. The principal part of the silver exists as chloride, and as oxide and carbonate of iron are present the extraction of the silver will be much facilitated. There was out on the surface in September, 1862, about 900 tons of ore of superior ley, and he considers that he does not exaggerate when he states that in May, 1863, there were at least 1500 to 2000 tons of ore extracted in Tontal, the average yield of which will be over 200 ozs. to the ton. Firewood and water are abundant, but capital is wanting; and any speculator offering at the mines half the real value of the ore would obtain them, in consequence of the miners not having funds to pay for transport. Recent advices from the district inform him of several most important discoveries of new veins and lodes, and the number of mines now in operation exceeds 100. Some of the lodes are as wide as 3½ yards, and, on the whole, might average 1½ yard, so that a fair quantity of ore could be extracted daily. Many of the wider veins are comparatively poor (about 60 ozs. to the ton), but worked on a large scale would pay remarkably well. He considers it to be a great mistake to take out Cornish miners to South America. He believes that by employing native miners, and working economically, labour might be less expensive than it is in England.

With a view to the erection of reducing works, and purchasing the ore, a joint-stock company, of which the author is the manager, has been formed, with a capital of \$110,000, but he considers there is ample room for three such companies, the district being 90 miles long by 45 miles wide. After describing the unsystematic mode of working pursued at La Carmen, he gives the results of 24 assays of average samples from the different mines at Tontal and La Huerta, obtained by him in the Government laboratory at San Juan—the average is 356 ozs. of silver to the ton. In working the mines of San Juan he proposes to dispense with perpendicular shafting altogether (except for purposes of ventilation), and to work on the lode itself by means of chibones and frontones. He considers that by extracting 15 tons of ore per day, containing on the average 50 ozs. of silver to the ton, a profit might be realised of 1341. 18s. per day, or 40,409l. 5s. per year, working 300 days. He considers that the Tontal district has good chances of becoming at some future and no distant period of considerable importance in the mining world.

The route to La Huerta is next described, and by this means we are brought to the mining district itself. Upon reaching the first mine, situated in a deep quebrada, he found that it had been worked as a gold mine, but was really a quartz vein, impregnated with red oxide and blue and green silicate of copper, containing some gold. The veins were well formed, and promised fairly, but he sets down all the mines in the district as of little importance. The only one that deserves attention is La Santa Domingo; this mine is 150 yards deep, and wretchedly worked; the roof and sides were almost tumbling in, and he only refrained from pronouncing it denunciable from the fact that up to that time they were comparatively ignorant of the proper mode of working. The vein is not very wide, nor constant in its width, varying from ¼ yard to 1 yard, but yielding massive galena, of a ley perhaps superior to any on record; some samples yield as much as 7200 ozs. to the ton, and the average ley of ore extracted is 800 ozs. 1 specimen of native silver is also found. From the antiquity of the process in use, it takes two months and 28 days to do the same work that would be done in England in 24 hours; yet so wedded were the proprietors to the old system, that they refused the Inspector's offer of drawings of a model lead furnace, and continue to be guided by an old Frenchman, brought from Cordova at a high salary.

In the neighbourhood of Marayes, Major Rickard found thin beds of bituminous coal, but questions its commercial value. He is of opinion much may be done there, as the greater part of the mines are unexplored, and any number of veins may be seen cropping out which might merit the attention of adventurers. In the remaining chapters, the return of the author to San Juan, and his visit to Buenos Ayres, in order to be sent to this country to purchase the necessary machinery, and select competent men to manage the mines, and the advantages of the Argentine Republic as a field for emigration; is pointed out. The entire work is very readable, and contains much valuable information.

"A Mining Journey across the Great Andes; with Explorations in the Silver Mining Districts of the Provinces of San Juan and Mendoza," &c. By F. J. RICKARD. London: Smith, Elder, and Co., Cornhill.

"GOOD THINGS FOR RAILWAY TRAVELLERS" is well calculated to afford an almost interminable source of amusement, and a ready means of rendering tedious journeys short. Railway travelling, the doctors tell us, is seldom injurious to health, but that the sight may sometimes be affected by fixing, or rather, attempting to fix, the eyes upon the rapidly passing objects; and as the best remedy against the evil of looking out of the window is to have something within it more attractive, "Good Things" stands a fair chance of becoming a well-known specific amongst railway travellers. "Good Things" contains 1000 anecdotes of all conceivable kinds, and all excellent. It matters not whether our particular choice is in the direction of philology, classics, or history, we shall be equally delighted with the sketches we meet with. We may compliment a friend with "It is a capital case—i.e., twelve or three (très étroit); or we may study Latin from the writings of Swift, of which we give a specimen—

Mollis ab acuti.  
No lazo hinc. Omni de armistress;  
Canta disco ver. Meas alio ver.  
But as mining is the particular question in which our readers are interested, we may extract a brief historical account of the visit of the Queen and Prince Consort to a deep mine in Cornwall—"I received a letter one evening from Mr. Edmonds, to say as how that Prince Albert was coming to our main the next morning. Thinks I, what can the Prince be coming to our main for? And I couldn't sleep for the night for thinking what I should say to the Prince, and what the Prince said to me. Well, in the morning, sure 'nuf we saw the chay coming, and who should be in it but the Queen, as well as the Prince! There was a stone wall betwixt, and to the main it, and it was down in a minute—in less than no time, and they come on, and the Queen got out of the chay, and ran about in the wet grass like a Billy! Says she to Mr. Taylor—something, but I don't know what—but says he to me, 'Is it safe for the Queen to go into the main?' 'Safe,' says I, 'Yes, as the Rock of Gibraltar! So the drains were croft foot, and some straw a throwed into one, and some green balze after it, and the Queen skipt in like a lamb, and I do believe that I touched her! She didn't like it, tho' when 'twas wet; but when we cum on as far as we could to the west load, the Prince took the pick, and he throw'd to like—like a man! and he got a bit o' ore. This,' said he, 'is from the west load, so I puts 'em in to my left pocket, and this is from the east load, so I puts 'em into my right pocket.' And as they were coming out, says the Queen to Mr. Taylor, says she, 'What's there blue that I do see?' 'Bliss ye, ma'am,' says he, 'that's the light o' day.' One hundred and twenty miners were ready to cheer 'em as they drove off (all red, like Ingles, from the red ore of the main), and we did cheer to be sure, as never was before."

"Good Things for Railway Readers." One Thousand Anecdotes, original and selected. By the editor of the "Illustrated Railway Anecdote Book." London: Lockwood and Co., Stationers' Hall-court.

DEATH OF MR. BOTFIELD, M.P.—We regret to announce the demise of this gentleman, which took place at his residence, in Grosvenor-square, after a lengthened illness. The deceased was the only son of late Mr. Beriah Botfield, for a number of years the proprietor of the celebrated Old Park and Stretley Ironworks, and also proprietor of the Clay Hills Collieries, Herefordshire, of Norton Hall, Northamptonshire, by Charlotte, daughter of Dr. Withering, of Edgbaston Hall, and was born in 1807. He filled the office of high sheriff of Northamptonshire in 1831; was appointed a deputy-lieutenant of that county in 1841, and of Shropshire in 1855. He was first returned for Ludlow in May, 1840, and sat till the general election in 1847, when he was defeated, but was again elected in 1857. In 1858, Mr. Botfield married Isabella, second daughter of Sir Baldwin Leighton Bart., of Lorton Park, Shropshire.

LIVERPOOL GEOLOGICAL SOCIETY.—The second fixed meeting of this society took place on Friday, at Wigton, the proceedings consisting chiefly of an inspection of the coal workings and strata in the district named. In the first instance, the party were conducted to the Douglas Bank Mine, which is now in course of construction by Messrs. Case and Morris, and under whose liberal invitation and courtesy the company were indebted for the very agreeable proceedings of the day. Having inspected the Douglas Bank Works, the company were conveyed to the Rosebridge Collieries, at Ince, which may be said to be one of Messrs. Case and Morris's model mines. They were here shown the sections of the different workings, under the courteous superintendence of Mr. Bryham, the obliging manager, who explained to them the geology of this portion of the Lancashire coal field, and the general mechanical appliances for conducting the mine. Leaving that portion of the company's establishment, the visitors repaired to one of the workshops, where the preparations for the descent were made, and it was somewhat amusing to notice the faint-heartedness which at the outset displayed itself on the part of many of the "stronger sex," but, whether it arose from the firm resolution and determination manifested by the ladies, or from some other cause, the entire party descended the mine, and during a period of more than two hours were engaged in an interesting survey of its wonderful properties. Amongst the ladies who descended and braved all the terrors of a subterranean region of upwards of 600 yards from the surface of the earth, were the Messrs. Alcock, Johnson, Moore, Gibson, Bryham, Gregson, and Hardy, and Messdames J. Gibson, Turner, and Jackson. After reaching the "upper" earth, the visitors were entertained at a sumptuous banquet in one of the workrooms, of which about 100 ladies and gentlemen partook. Mr. Morris, jun., presided, and amongst the gentlemen present were Mr. John Cross, the Mayor of Wigton; Professor Dinwiddie, of Manchester; Mr. Higson, one of Her Majesty's Inspectors of Mines; and

several other scientific and industrial gentlemen. "Success to the Liverpool Geological Society," was proposed by Mr. Higson, and responded to, in an appropriate speech, by Mr. Morton, the secretary. The party returned to Liverpool, highly pleased by the interesting proceedings of the day.—*Liverpool Albion*.

#### TRUTH'S ECHOES, OR SAYINGS AND DOINGS IN MINING.

The Mining Share Market continues very inactive, and the *bond-fide* business of a very limited character, with prices in many instances quite nominal. The decline which has taken place in the price of tin, and the absence of several dealers, who have taken advantage of the quietness of the market, generally have a tendency to lessen business; whilst, on the other hand, there are favourable contingencies, which afford every encouragement to hope for an early change and a general revival. The fortnightly settlement took place to-day, when the transactions for the account were arranged. Perhaps few accounts passed off with more ease, in consequence of the little amount of business done, resulting from the want of confidence produced by the severe losses arising from the recent delinquencies.

WHEAT SETONS, after slight fluctuations, left off steady.—BARRETT and BELLER have been offered at lower rates.—CLIFFORD and STRAT PARK have been more in demand, and several transactions completed at improved prices.—EAST BARRETT and COOK'S KITCHEN have been fairly dealt in at present quotations.—EAST CARN BREA and GREAT SOUTH TOLGUS have changed hands at lower rates.—TINCROFT and WEST CHIVERTON are in request at buyers' prices.—EAST GRENVILLE and WHEAL GRENVILLE have been in better request.—UNTY and UNTY have been done at nominal figures.—WEST FRANCES have been fairly enquired for at fair market prices.—NORTH DOWNS, NORTH CROFT, and NORTH BULLER have been dealt in at lower rates.—NORTH TREASURY and GREAT WHEAL BRY are doing deal in market quotations.—A large number of WHEAL KIRK (St. Agnes) have changed hands this week, advantage being taken of the present high price.—EAST ROSEWARNE, ROSEWARNE UNITED, and EAST PROVIDENCE are being sought for at lower rates.—NORTH ROSEAR and ROSEAR-NORTH continue heavy at present prices.—HARRIETS have been in request at minimum quotations.—BARRETT and GRIFFS, WENDRON CONSOLS, and SITHNEY CARNMEL are less sought for at present quotations.—WHEAL GRIFFS are still in request at buyers' prices.—EAST WHEAL LORVELLA have been in fair demand, but prices have relaxed.—TREMATINS continue in demand, and several bargains effected at lower figures.

GREAT WHEAL FORTUNES have been offered at lower figures.—MARGARET and WHEAL PROVIDENCE maintain their prices.—KERRY (Llanant) and MARGARET are sought for at nominal rates.—BRYN GWIGIO have been in good demand, consequent on a great improvement in the mine. Prices advanced, but since slightly receded.—LONO RAKES have also changed hands.—SOUTH CARADONS are being sought for at fair market figures.—EAST CARADONS have seen less fluctuation this week than for some time past, and remain steadier at slightly improved rates.—MARKE VALLEY and HERODSFORD have fluctuated, but an improved demand has taken place for the latter.—LUDCOTT and GOMMENA are a little firmer.—GLASGOW CARADONS find buyers at nominal prices.—MARTY ANN, TRELLAWNY, and WEST CARADONS are slightly weaker.—NEW WHEAL MARTHA, EAST HUNDELL, and BRESOR have changed hands, without improvement in price. LONO POLMAR.—The report of this week is less favourable, there having been a falling off in two or three points, without any corresponding improvements, which generally take place. The 50 east is worth 12l. per fm.; the 60 east, 8l.; the 70 east, 25l., west 10l.; the new lode in the 70 east 6l. per fm.; and the 70 west is saving work.

CORNUBIA TIN.—At the special meeting held last week all the preferential shares were readily and voluntarily subscribed for, thereby affording the company the means of liquidating the liabilities and completing the stamps and other erections, which were progressing so satisfactorily, as well as leaving about 4000l. in hand. There is now in operation 32 heads of stamps, and in about two months 32 additional heads will be in full work, whilst the quantity of tin to be supplied is rapidly accumulating. They have resumed driving the cross-cut in the 70, and are in daily expectation of cutting the lode found so productive in the shaft a few fathoms above. They have intersected a branch or leader of good work for tin, which speaks favourably of the lode now approaching. All other places are looking well, with increased returns of tin.

At CREBOR very little change has taken place since last noticed; the lode in the shaft continues the same, no lode having been taken down, consequently the best is anticipated in the absence of positive evidence. The 84 west is reported to yield 6 tons per fathom. The other places of operation are without any change. The next sale will be on Thursday, when 106 tons (computed) will be sold.

WHEAL TREFEIL.—The operations here are of a very improving character, and although some little delay, as well as disappointment, has taken place in attaining the whole of the objects to which the operations have been directed, the intersecting the quarry lode by the 15 cross-cut proceeds satisfactorily, and although the end is a little disordered at present they have a good course of ore in the back, varying from 10l. to 40l. per fathom, and the 30 is now within 10 fathoms of the ore ground passed through in the level above. On Tuesday last they intersected, by the add cross-cut south, the first of three or four lodes, all within 50 or 60 fathoms of each other, and about 95 fathoms south of the Quarry lode; the lode is reported to be worth 20l. per fathom. The discovery is very important, as this run of lodes are parallel, and in similar stratification to the other productive lodes. There is another run of lodes to the north of the present workings, consequently Polmar may be looked upon as a very youthful mine. At the four-monthly meeting, held on Wednesday, a credit balance of 4921. 10s. 6d. was carried to next account.

NORTH JANE.—The prospects are considered of a very cheering character, inasmuch as they are making fair profits from the gossan, which contains a large percentage for silver, whilst the lode continues to improve for tin. During the three months ending July 23 they have sold upwards of 129 tons of gossan, realising 4681. 7s. 9d., and about 24l. worth of tin. The discovery is very important, as this run of lodes are parallel, and in similar stratification to the other productive lodes. There is another run of lodes to the north of the present workings, consequently Polmar may be looked upon as a very youthful mine. At the four-monthly meeting, held on Wednesday, a credit balance of 4921. 10s. 6d. was carried to next account.

NORTH CROFT.—The operations which are being carried on in the development of Reeve's lode in depth appears to be working out with spirit, with every probability of profitable results. The engine-shaft is in course of sinking under the 170 in a very promising lode, and the level of the shaft is being rapidly improved. The 170, and that level drive 8 fms. east in a very promising lode for tin and copper, and the other levels are also looking encouraging. The 15 west of Peterick's, has passed for 14 fathoms through a large and productive lode, averaging 16l. per fathom, and the 150 is looking more cheering. During the last four months the loss is given at 236l. 5s. 2d., whilst the preceding account for five months showed a loss of 708l. 19s. 5d.

EAST PROVIDENCE.—The chief operations are now carried on in the deeper levels, where they have a very productive lode for tin. They have gone through an extensive and continuous run of tin ground, as long and good as any in the district. The 170, and that level drive 8 fms. east in a very promising lode for tin and copper, and the other levels are also looking encouraging. The 15 west of Peterick's, has passed for 14 fathoms through a large and productive lode, averaging 16l. per fathom, and the 150 is looking more cheering. During the last four months the loss is given at 236l. 5s. 2d., whilst the preceding account for five months showed a loss of 708l. 19s. 5d.

WEST WHEAL FRANCES is represented to be progressing highly satisfactorily. The new engine-shaft has been completed to the 70, with all the necessary requisites fixed on and on the mine. The steam-stamps, capable of driving 100 heads, is at work with 16 heads at present, and the same number is to be added, and the new pumping engine can be got ready before the wet season sets in, and all the heavy expenses charged up. The 55, west of new engine-shaft, is in a promising lode, worth 20l. per fm., and opening out larger in the end. The 60 is also in a promising lode. There is a long run of tin ground opened on between the 60 and 85 fms. levels, which can be taken away at a moderate cost. The mine, upon the whole, is looking very encouraging for a profitable and permanent one. At the quarterly meeting, held last week, a credit balance of 50s. per share was made, to discharge the heavy costs incurred by the recent erections.

CALVADACK is reported to be looking encouraging, and holding out considerable promise of becoming a paying mine. The Granitic and Fire and Sword lodes are about paying costs. The 92 east is approaching the cross-course, east of which some important discoveries are expected. Painter's shaft is down below the 80, but is suspended until the 92 has gone through the cross-course. The 80, east of cross-course, is worth 12l. per fathom; the 70 has just passed it, and is at present disordered. The 60 east is worth 10l. per fathom. There is every probability that when all the levels are beyond the influence of the cross-course and indistinctly in a good and improving lode. At the meeting recently held a call of 12s. per share was made. The loss on the quarter arises from the expenses attending the erection of a new burning-house, and the development of the Granitic and Fire and Sword lodes.

At EAST WHEAL LORVELLA the lode in the shaft continues to hold remarkably well, and a further improvement is reported to have taken place, being now worth 100l. per fathom. Several agents have recently inspected the mine, and given estimates of the value of the lode, which have varied from 70l. to 90l. per fathom, but now a further improvement is advised; the lode is full 5 l. wide, and indicating every appearance of a permanent one. The shaft is sinking below the 26, in the back of which level the lode is worth 40l. to 60l. per fathom.

BRYN GWIGIO is reported to have further improved in the 90 east, where the lode has increased to 10 tons of lead ore to the fathom. The lode in the shaft has also improved, and like to become very productive; for 15 fathoms in sinking on the course of the lode it has been gradually improving, and now bids fair to make this a good paying and permanent mine.

From Mr. EDWARD COOKE.—The market has been dull throughout the week, and, with the exception of dealings in a few mines, business in the share market may be termed at a standstill, although not more so than is usual at this period of the year, when the public generally betake themselves to the seaside for recreation for a few weeks. The present is, therefore, the time to buy rather than to sell, as a reaction will, no doubt, soon take place. A few weeks since I expressed an opinion that the over-sold accounts in EAST CARADON had caused a fictitious price for the shares. Some of the accounts having now been adjusted, the price has receded some 3l. to 4l. per share. According to the estimates of several inspecting agents, the reserves of ore have been variously estimated at from 26,000l. to 50,000l. Even taking the value at the latter amount, the mine at 180,000l. would appear to be selling ridiculously high. Up to the present time, it is to be regretted, the bottom levels have proved a great disappointment, and unless some great improvements take place, the reserves of ore will rapidly decrease at the rate they are being taken away. In district like Caradon, however, we ought not to despair on account of a mine falling off a little in its productiveness, which may only prove to be of a temporary character. Still, with all the probable chances of improvement, and (say) even 75,000l. worth of ore, for the sake of argument, no reasonable person can come to any other conclusion than that East Caradon at 170,000l. to 180,000l. is selling at a very high price. It must be borne in mind that to bring the ore to market will absorb some 10s. in 1l. of its value in working costs—hence the profits will be reduced to a considerable extent. In contrast with East Caradon, let us instance EAST WHEAL BARRETT, which is selling at one-fourth less price, and paying 12l. per share per annum in dividends, while the price is only 80l. to 100l. There is much better speculation in the latter, seeing the great chances of cutting ore in the bottom level, which on taking place would cause a very great rise in the price of the shares. Owing to the decline in the price of tin, shares in mines producing that metal have declined in price. TINCROFT shares have been more offered, but principally speculatively. In a few days the dividend and bonus will be declared, and a splendid report of the mine will be given by the agents. This is a safe property to return about 12 to 14 per cent. for many years to come; in fact, there is not a safer mining property in Cornwall to invest in. WEST CHIVERTON is still opening up well; the ends in the various levels, more particularly going west, are very rich, worth in the aggregate from 200l. to 250l. per fathom. The shares have been in good demand, and the buyers are principally from Truro, the locality in which the mine is situated. WEST CARADON shares have now receded to a price that would seem to warrant a pur-

In the event of ore being discovered by means of some of the cross-cuts that are now being put out, the shares would have a rise of 5l. in a day. At NEW SOUTH CARADON the operations have been retarded on account of the rather difficult ground met with in the level, and a wheel-pit. Now this difficulty has been overcome, good progress will be made in erecting the shaft and stamps, and sinking below the adit, on some of the very promising lodes in the sett. I again advise my readers that the mine is well deserving their attention. They will do well to remember that they are not in this instance, as usual, to buy into a concern that contains no merit, and at a very high premium, but into a concern that will bear comparison with many mines that are standing at five times their market value. It is well managed, and will some day take a prominent position in public estimation. At CARADON UNITED the engine will be set to work in about a fortnight, when, as soon as the stamps can be got to work, both tin and copper will be returned. I am informed that already there are from 50 to 60 tons of good quality copper ore at surface, besides a large quantity of tinstuff; and, in addition to this, there is a large balance of cash in hand, and everything paid for. I am still very sanguine of this mine proving a great success. The standard for copper ore is firm again this week, with an upward tendency.

#### FOREIGN MINES.

ALTEN and QUENANGEN.—Chas. Trelease, July 22: Quenangen.—Lode E: The prospects continue very encouraging in the 10 west, the leader is variable in size, being from 6 to 12 in. wide, but is composed mostly of solid yellow ore; the other, or hanging portions of the lode, consist chiefly of a ferruginous quartz, which is interspersed throughout with spots of yellow and purple ore. In the past week we have opened on the lode in the roof, where it yields fair quality work, with equally good veins as in the level. In the deep adit, east of Saxe's shaft, the vein is not much as before. On lode A we have broken through from the adit to the old stope, so that all the ground above is now effectually drained. In the bottom of the stope, on Badern lode, the greenstone on the hanging side has made a sharp turn northerly, and will apparently cut off, or shift, the vein. We are now stopping the western end, which is worth about 5 tons per fathom. The several trials at surface are being continued with varied success, but at present the chief point of attraction is the 10 west.—Raisap: In the shallow adit, the stope lode cut 3 tons of ore per fathom, with a good looking matrix, and other promising indications. In the 20, west of Mox's shaft, the vein is still small, but consists of good saving work. The south-west lode is about 15 in. wide, with a fair intermixture of ore work, fully 2 tons per fathom, and appearances lead us to expect that there is still some good stopping ground ahead. The water has not risen to the 20 for the season, but is at standstill a few fathoms below.—Old Mine: No material change has taken place in the 10 south since our last, where the lode is of good size, with saving work intermixed. The side stope in this level continues to yield about 3½ tons of ore per fathom, with a good appearance. In the back of the 10, further north, the lode is composed principally of quartz, with a leader of coarse saving work intermixed. The working above the 5, south of Pederson's rise, is yielding some saving work, and the lode, which is 9 ft. wide, looks rather more kindly again. The two foot stope north of the rise still hold out good indications, and yield about 3½ tons of ore per fathom respectively. In the bottom of the 5 we are cutting in at two points, in order to form a good bergfest to support the roof, which will be necessary, the stratum above being rather loose; the lode here varies from 4 to 6 ft. wide, and yields about 3 tons of ore per fathom. In the back of this level the lode is fully 9 ft. wide, and although the matrix is composed principally of quartz, we still frequently meet with good bunches of paying ground. On the whole, the prospects here continue favourable, and we hope to make good returns during the summer.—United Mines: In the surface working at Ward's the lode has latterly been rather unsettled, but it is again assuming a settled appearance, and yields good stones of ore. To ascertain if the lode opens out going north is the great point here, which we felt sanguine will prove to be the case if sufficiently followed up. The pitches on Woodfall's lode have been less productive of late than usual, but those places being frequently subject to such changes we view the present as only temporary. The returns for the past quarter are driven down, and the results, considering all the holidays and other impediments, are equal to our expectation. It is intended to have started for Quenangen to-morrow, but the unexpected arrival of the bergmeister by the steamer will compel us to postpone it for a day or two, as he will first examine the mines on this side.

BEARIS TIN STREAMING.—Capt. Bray, in his most recent letters, reports the continuance, to a great extent, of the unprecedented dryness of the season that has prevailed during a great part of the summer in the North of Spain. The lowness of the streams, he has only been able by the process of stamping and washing, and the employment of ventureros, to get executed a limited amount of work, and actually to extract and get in stock but a small quantity of tin ore. At the San Miguel group of pertenencias extensive preparation has been made in the way of getting ready for stamping a very large supply of kaolin, and a certain number of stamps have been kept constantly supplied. Arrangements are also in progress to bring into that group an additional supply of water during the dry season of the year by a last (which can be quickly completed at a very small cost) from a stream which flows past at some considerable distance from San Miguel. When this last supply of water is brought to the already existing supply, it will afford a supply of water to this group as will keep 20 sets of stamps, comprising 24 heads each, and one set of 6 heads, in constant work night and day throughout the winter six months of the year, and at least half that number during the summer, or driest season—that is to say, to keep 40 heads of stamps going, on the average, all the year round. During the past dry months the operations of the company have otherwise consisted in continuing to prosecute work at the other four groups of kaolin, belonging to them, preparatory to the erection of the requisite stamps. At the two groups known as San Vicente and San Patricio there will be kaolin and water to be brought to a spot where their produce will be treated, together by the same appliances, to keep one set of 24 heads of stamps going in a similar manner during the respective seasons of the year. It is computed that these stamps may be got into operation soon after the end of the present year. At the San Adolfo group one set of 12 heads of stamps may be erected in about the same time, and kept in constant work. At the San Francisco group an add of considerable length is required, and is being driven. When this shaft is completed, and water brought in by a last, this part of the property will afford scope for extensive operations. As regards the four last-mentioned groups, Capt. Bray reports that results are equal to, or greater than at San Miguel might be anticipated. In each place the clay is richer than at San Miguel, and the cost of erecting, working, &c., will be about the same. His estimate of San Miguel, and the cost of erection, Miguel having been that 24 heads of stamps will treat fully 3000 tons (which is 200 tons per month in excess of the quantity mentioned in the last report, issued by the directors) of kaolin per month, and that the same will yield 7 lbs. of ore per ton, and that the ore will yield at least 60 per cent. of tin. It will be seen, therefore, that a large amount of work has been effected, and is being carried out at these mines, and that, after the proportionate to the labour employed, the supply of water which then, even during the driest seasons, it is confidently anticipated will be adequate, as has been already stated, to keep going, in the aggregate, a large number of stamps. The company have five kaolin groups, containing 32 pertenencias, and four quartz groups, containing 7 pertenencias, yielding tin.

LINARES.—Aug. 3: Pozo Ancho: West of Engine-shaft.—South Lode: In the 95, west of No. 129 winze, the lode has greatly fallen off since our last report, and is at present small and poor, but we expect an improvement shortly, as there is still a long piece of ore ground in the level above. In the cross-cut south, in the 85, the ground is still very hard, and the water issues freely. The lode in the 61, east of Lido's winze, is worth 2 tons per fathom, and still looking very promising. In the 55, west of Bobble's winze, the lode is looking more open, composed of hard quartz and lead ore; for the latter worth 1 ton per fathom. The lode in the 51, west of Crosby's shaft, is still compact and firm, opening good ground, worth 2½ tons per fm.—East of Engine-shaft: In the 95, east of Yida's winze, the lode is still large and poor. The lode in the 85, east of Monter's cross-cut, is very small and poor. In the 85, east of Patricio's winze, the lode is much the same as last reported, composed of gossan, soft spar, and lead; for the latter worth 1½ ton per fathom. The lode in the 85, west of James' winze, is large, and little improved, composed of carbonate of lime and lead ore, worth 1 ton per fathom. The lode in the same level east of a similar winze, the lode is large, but very poor. The lode in the 75, west of Field's cross-cut, has improved a little, and is now worth 1½ ton per fathom.—North Lode: The lode in the 85, east of Ortega's winze, is producing good stones of lead, worth 1½ ton per fm. In the 75, east of Field's shaft, the lode is composed of quartz, spotted with lead, not to value. The lode in the 65 east, and west of cross-cut, is not looking quite so promising as when intersected.—Shafts and Winzes: In the engine-shaft, sinking below the 75, the men are going on satisfactorily. The lode in the 130 winze, sinking below the 75, is large and open; worth 1 ton per fm. In Santana's winze, sinking below the 75, the lode is large and open; worth 1 ton per fm. We have re-set the sinking of this winze, and hope to hole during the present month.—General Remarks: We are still deficient of labourers. We have got up the spring beams and the bob at Crosby's shaft, and hope to get in the cylinder during the coming week. We estimate the raisings for August month (five weeks) at 400 tons. Crosby's shaft is being cut down as far as possible.

FORTUNA.—J. Michell, P. Curtis, Aug. 1: Canada Inco.—West of Taylor's Engine-shaft: In the 100, driving east of Adit's shaft, the lode is still poor and ground hard. In the 100, west of Clave's stomp-winze, there is a large open lode, consisting of decomposed granite, quartz, and lead ore, worth for the latter 1½ ton per fm. In the 90, west of Zamora's winze, we have cut through another limb of the cross-course, and have hit on the point of the lode, showing spots of ore. The lode in the 80, west of Santana's winze, is looking more kindly, and the ground is easier for work. In the 70, west of Guillermo's winze, the lode has rather declined in value since last report, and is now worth 1 ton per fm. The lode in the 55, west of Salvador's winze, is still small and poor.—East of Taylor's Engine-shaft: In the 55, east of Lázaro's winze the lode is poor, and the ground very much unsettled. The lode in the 45, east of Jose's winze, has improved of late, and is worth 1 ton per fm., but the ground is hard for driving. The 30, east of Domingo's winze, is opening an excellent piece of ground, which is worth 4 tons of lead ore per fm.—Shafts and Winzes: In Lowndes' shaft, below the 55, the lode is worth 3 tons per fm.; this is down the required depth for a 70 fm. level, and the men are now engaged casing the shaft to bring down part of it is standing to the north. In Cana's winze, below the 46, the lode is small and poor. In Gonzalez's winze, below the 90, the lode is large and open, composed of granite, quartz, and lead, worth for the latter 1½ ton per fathom and open, composed of the same, below the 20, is worth 2 tons per fm.; very compact and firm, underlying very flat north. Lázaro's winze, below the 45, is completed to open the 55. Pascual winze, below the 45, is situated 40 varas east of Lázaro's, and in advance of the 55.—Los Salidos Mine.—West of Engine-shaft: In the 75, west of Joaquin's winze, there has been no change since last report. The lode in the 65, west of Alcide's winze, is very compact and regular, worth 1 ton per fm. The lode in the 55, west of Boldez's winze, has very much improved since last report, and is now worth 2½ tons per fm. In the 45, west of San Carlo's shaft, the lode is regular and open, worth 1½ ton per fm., but rather declined in value since our last report. The lode in the 30, west of San Carlos' shaft, is small but open, and letting out water very freely.—East of Morris's Engine-shaft: In the 75, east of Gregorio's winze, there is a large kindly lode, consisting of gossan, decomposed granite, and lead ore, worth for the latter 3½ tons per fm. The lode in the 65, east of Colagon's shaft, is small, and the ground hard. In the 55, west of Bliciana's winze, the lode is compact and regular, composed of quartz and lead ore; worth for the latter 3½ tons per fm. The 55, east of Gine's winze, is holed to Parra's winze by a bore-hole. In the 55, east of San Pablo's shaft, the lode is worth 2 tons of lead ore per fm. It is 3 feet wide, composed of quartz, gossan, and lead. The lode in the 45, east of Miguel's shaft, is very small, and the ground hard for driving.—Shafts and Winzes: Morris's engine-shaft, below the 75, is going down in a strong lode, composed of mudi-quartz, and lead, worth for the latter 2 tons per fm. In Buenos Amigo's shaft, below the 5, the lode is very compact and regular, and worth 2 tons per fm. In Sanchez's winze, below the 65, the lode is worth 1½ ton per fathom, and divided into two parts. The tribute department is yielding about the average quantity of ore. We estimate the raisings for August month (five weeks) at 430 tons.

WEST CARADON.—Capt. Plummer, July 27: All our mining operations are going on satisfactorily, and no change has taken place at any point worthy of remark, except in the 10, on the west of Grenville's shaft (Fire lode), where we met with a dyke,



chance to be made of them. There is yet a very large amount of undeveloped ground, and also good reserves of ore, besides a large balance of cash to the credit of the company. The men are placed in a slope on the back of Jack's mine, on the same lode, which will yield from 1½ to 2 tons per fathom. We are pushing on the dressing as fast as possible, and during the past week we have cleared 70 tons.

**ENGLISH AND CANADIAN.**—H. Williams, July 9: Kent's Shaft: The mine on Fanny Eliza, No. 2, was sunk 3 fms. 2 ft. 6 in., yielding 2½ tons of 45 per cent. ore when dressed. A fresh branch was met with, producing some excellent work, and worth about 1 ton of 45 per cent. ore per fm. In order to win this new branch to the best advantage, we have commenced stopping the ore that we have been lately opening out, and have set the same to six men, at \$30 per fm., and from present appearances are likely to obtain a moderate pile of ore during this month. William's mine was sunk 3 fms. 3 ft. 4 in.—about 40 tons of 3 per cent. ore in the rough. Re-set to six men, at \$30 per fm., an increase of \$5 per fm. Hay's shaft was sunk 3 fms. 2 ft. 8 in. During the latter part of the month the heat was found to be a serious interruption to the work, and necessitated the erection of a ventilating furnace.—Dressing: We sampled a pile of best ore, estimated from 18 to 20 tons. There is also a pile of stamps ore nearly ready for sampling, estimated from 18 to 20 tons. During the past month the stamps were almost suspended on account of the great scarcity of water.—Roads: The 14th and 15th concession road is so far complete as to admit of being travelled upon, and the work on the road leading to the Craig's road has been pushed on with vigour, and will be completed about the middle of the present month. The bridge on the same road has not yet been commenced. The ten acre lot has been located and surveyed, as also the line of tramroad to the same across lots 18 and 19.

**CENTRAL AMERICAN.**—June 27: San Pantaleon Mine:—The Cornubia engine-shaft has been sunk a further distance of 1 fm. 6 in., by three Englishmen and three natives, at the rate of 221. 10s. per fathom. The lode, which is about 18 in. wide, continues to yield a little good silver ore. The shaft is now down 7 fms. 2 ft. under San Felipe.—Dolores Adit: The lode in the new, or Curia's, slope, from the back of this level, east of the ladder-branch, is 20 in. wide, and producing 6 cwt. of good quality silver ore per fathom.—San Juan, or 10 fm. level, under Dolores: Four men have sunk No. 5 mine, sinking from this level, east of the cross-course, 6½ ft., at \$7 per fm., where the lode is 2½ feet wide, composed of felspar, mudiic, and silver ore, producing of the latter about 6 cwt. per fm. of good quality. The lode in No. 8 slope, from the back of the same level, is 20 in. wide, and has produced 1 ton of rich silver ore per fm., and is at present worth from 10 cwt. to 12 cwt. of ore per fm. of good quality.—San Ricardo, or 20 fm. level, under Dolores: Six men have driven the end extending east from No. 2 cross-course 3 fms., at \$11 per vara. Here the lode is 2½ feet wide, composed chiefly of feldspar mixed with iron pyrites, and is producing about 3 cwt. of good quality silver ore per fm., and has a most promising appearance. This level, going west from Cornubia engine-shaft, has been advanced by four men 6½ ft., at \$8 per vara, at which point it is holed to Taylor's engine-shaft, thus forming a communication all through the mine at this depth. In No. 1 slope, from the back of this level, east of No. 2 cross-course, the lode is 20 in. wide, and producing 6 cwt. of silver ore per fm. The lode in No. 3 slope, from the back of the same level, is 2 feet wide, and has been very productive throughout the month. The larger portion of this slope has been wrought through to the level above; the remaining part, which is 5 fms. in length, produces from 6 cwt. to 7 cwt. of good silver ore per fm. In No. 4 slope, from the back of this level, the lode is 18 in. wide, and worth from 5 cwt. to 6 cwt. of silver ore per fm.—San Felipe, or 30 fm. level, under Dolores: In consequence of the lode having changed both its bearing and underlie, we have experienced some little difficulty in finding it on the eastern side of the level, and the vein has been only just reached. At the point of intersection the lode is of a most congenial character, composed of calcareous spar, with strings of ore passing through it. We calculate that it will produce 7 cwt. of silver ore per fathom.—San Alfonso Deep Adit: Six men have driven the end extending east in a direct course by lines towards the shaft during the month 4½ ft., at \$20 per vara.—San Antonio Mines: Six men have driven San Ramon, or the new deep adit level, 13 ft., at \$14 per vara. The lode in the present end is 15 in. wide, composed of gossan, mudiic, and blende, and is at present worth from 5 cwt. to 6 cwt. of silver ore per fm.—San Felipe, or 30 fm. level, under Dolores: Six men have driven 7½ ft., at \$9 per vara. Here the lode is 20 in. wide—a mixture of gossan, blende, and mudiic, carrying with it against the foot-wall a rich branch of silver-lead ore, which will produce from 4 to 5 cwt. per fm.—Santa Rosalia Mine: Four men have driven the level extending east from the new south cross-cut 5 fms., at \$7 per vara. The lode in this end is composed of felspar and iron pyrites mixed with silver ore, and is producing of the latter about 4 cwt. per fm. of low quality. During the month ending June 27, 141 tons 9 cwt. of ore were returned from San Pantaleon mine, the average assay of which was 100 ozs. per ton, and 8 tons 8 cwt. of ore were raised in San Antonio Mine.—Hacienda de San José: The reduction operations have been carried on without interruption during the month; 189 tons 8½ cwt. of ore were reduced, producing 5321 lbs. 11 ozs. of amalgam; 540 lbs. 11 ozs. of cake silver were run into 14 bars. On June 29, 38 bars were despatched to Guatemala, estimated to produce \$28,439½.

**ALAMILLOS.**—Aug. 3: San Lino shaft, sinking below the 2d level, we expect will be holed in a few days. San Juan shaft, sinking below the 2d level, is also down to the required depth for the 3d level, and the men have commenced driving to-day. The Footway shaft, sinking below the 1st level, is much the same as stated in last report; still hard for driving. We are clearing an old mine sunk below the 1st level, which is going down in ground on the west side worth ¼ ton per fm. To the east there are old workings, and in order to make the mine good we have set the men to clear and sink a little, sinking the surface, in the same eastern shaft, for the western engine, which we are cutting down in old workings. In the 3d level, the west from mine, the end turns out some good stones of lead ore, but not to value. In the 3d level, east of San Juan shaft, the ground is favourable for driving; the first 2 fathoms will be carried high enough for a pit.—General Remarks: The surface works are going on satisfactorily; the engine-house is finished, with the exception of about one day's work of tiling the roof; the masons' work of the stack is also completed, and they (the masons) are now engaged walling the lower shaft. The carpenters have one whim ready to put up as soon as we hole San Lino shaft.

**VALGODEMARD.**—During the month of July we continued driving No. 1 gallery on the grey copper at piece work, by four men, driven 2 metres; ground very hard; the lode still turning east. We have left the lode remaining in the side for these last 2 metres, so as to take it down carefully without losing the ore. Since we have commenced taking it down to see the nature of the lode, yielding fine blocks of grey and yellow copper ore. I think it is improved in size, and also in quality, since my last; also the nature of the lode looks much more kindly. Continued sinking Long's shaft, by six men, at piece work; sunk 1 m. 70 c.; ground very much the same: lode looking well, yielding good quantities of grey and yellow copper ore, mixed throughout with lead ore; lode has every appearance of continuing the same in depth. Completed laying down the roller over Long's shaft, and commenced stopping, by two men, at day work; stopped 4 metres (cubes) in the back of No. 1 gallery; lode looking very well, yielding fine blocks of grey and yellow copper ore, mixed throughout with lead ore. Since we have commenced driving No. 1 gallery, lode looking very well; turned out a fine pile of first and second class mineral, and has all appearance of continuing the same, carrying a regular footwall, with a little feldspar on it, very kindly. Continued driving the cross-cut to the Filian Frederick, by two men, at piece work, 3 m. 40 c.; not as yet reached the lode; rock very hard; we had some stones with mineral in it; the cross-heads; in hopes to cut the lode every day. Continued driving the cross-cut to correspond with Long's shaft, by six men, at piece work; driven 5 metres; ground more favourable, yielding a little water; I am in hopes we shall cut the lode by the 15th of September, if the ground continues the same; specks of ore have been taken out from the end to-day. Continued driving No. 1 gallery lead lode, by four men, at piece work; driven 5 m. 50 c.; lode looking well, greatly improved in size: with two regular walls, yielding lead and yellow copper. Gallery No. 2 has been stopped since the 20th of July, by reason of its being too near the surface; the men commenced a cross-cut at the former forge pit to cut the lead 25 metres lower down, driven on No. 2 level, by two men, at piece work, 3 m. 10 c.; lode very regular, but not rich in mineral. I am sorry to say we have very much put out by reason of not having a good mining smith. Considering that we have lost a great many hands on account of the harvest, all other operations are going on the same as usual.—J. Hoskins.

**COPIAPO.**—Checo Mine, June 20: Estimated produce for June:—

Quantity.	Quality.	Price.	Amount.
First class dark ore .....	Qts. 450	40	18.00
Second class ditto .....	750	20	15.00
Third class ditto .....	125	15	1.87
Total .....	1324	Approximated value.....	\$3466.00

In No. 2 chiflon, or 20 fm. level, the lode is much the same as was last reported—very kindly. The 60 fm. level slope is looking so well as it was. In the 50 end, driving west, the lode is still poor.—Eastern New Ground: The lode in this chiflon is 3 feet wide, producing some good stones of ore.—Western Set: The lode in this chiflon is 3 feet wide, producing some very rich stones of ore, and looking very kindly for an improvement.—Western New Ground: The lode in this chiflon is much the same as was last reported, but is not deep enough as yet to meet with the ore. On the whole the mine is looking kindly.—G. Matthews.

July 3.—The agent advises the shipment, ex *Acacia*, of 1993 quintals of copper ore, of 20½ per cent, and another shipment of similar quality. The present management of the mine, which is in the hands of the same person, is improving, the yield being in June 1314 quintals, of 26 per cent., valued at \$3666.00. The Dulcinea Copper Mine is turning out a good deal of ore. The Al Fil Hallada Silver Mine is working profitably. The estates of the company are improving.

**PORT PHILIP AND COLONIAL GOLD.**—The directors have received by telegram from Suex, via Malta, the following advices in anticipation of the Australian mail, from their resident director, Mr. Bland, at Melbourne, giving the result of the month of May last:—Quantity of quartz crushed, 4800 tons; yield per ton, gold, 12 dwts. 15½ grs.; receipts, 51000; payments, ordinary, 17000; and on account of new stamps, 11000; = 29600; profit, 24000, remittance, 25000.

**VALLEZARCA GOLD.**—Chevalier E. Francfort writes as follows:—"I have been during last week at the mines and at the establishment at Battig. We are progressing well with our work, both underground and at surface, and I hope what we are doing will result in a most complete success. Some time next month I will send you an ingot of gold from the new discovery, chiefly on the refuse ore at Battig. I now send you a box of ore from the new discovery in the Cava Vecchia. It was brought direct from the mine by Capt. Roberts. You will please have an assay made upon the whole quantity. Herewith I have the pleasure of handing you Capt. Jas. Roberts' report, as follows:—"I am happy to inform that we are making great progress in the construction of the new trial mill, which will soon be ready; I hope it will answer. The Cava Vecchia level is still looking well. I have found visible gold in the ore of this level. The main line of leading towards the Cava Vecchia is improving. In all quality Nuova is nearly finished, and also the floors of Piazza Nuova. We have commenced working on the lower part of the canals from mine to Fornoleto. We are pushing work as fast as possible for construction of wheel pit and new wheel." Annexed is a copy of the assay of the ore from the new discovery mentioned by E. Francfort, and made by F. Claudet, of London:—An assay of a fair sample of the ore sent on the 8th inst. gave the following proportions of gold and silver per ton of 20 cwt.:—Fine silver, 6 ozs. 17 dwts.; gold, 5 ozs. 15 dwts."

**HOLLOWAY'S OINTMENT AND PILLS—COMFORT AND RELIEF.**—All afflicted with outward diseases may find their best friend in these well-known remedies. The ointment is invaluable in skin affections, ulcers, bad legs, sore breasts, scrofulous eruptions, and the most scrofulous complaints so apt to become hereditary. In all chronic and constitutional maladies, Holloway's Pills should be administered internally, while his ointment is applied externally—the one then assists the other, and as the outward deformity disappears the general taint is also banished. Holloway's treatment is reliable, gentle, purifying, and eminently restorative. In old ulcers, which are wearing out their victims, these remedies exert an almost magical effect—the ointment cleans the wounds and braces the relaxed vessels, the pills invigorate the generally.

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

**SILVER VEIN.**—Five small parcels of silver ore were sampled last week from this mine, of the computed collective weight of about 40 tons. Four were from tribute pitches, and realised 31. 13s.; 61. 13s.; 101. 6s.; and 131. 1s. per ton. One belonged to the adventurers exclusively, and was sold for 101. 1s. per ton. The highest priced ore, 131. 1s. per ton, was from tribute of 5s. in 11.

**ST. AGNES DISTRICT.**—West Polbreken shares are still in request, which gives evidence that the mining public are fully aware of the extraordinary value of this piece of mining property. The committee, too, are highly gratified at the prospect of being soon in a position to commence active operations, on a scale necessary to the development of its mineral wealth. There are few mineral properties in Cornwall having so many champion lodes passing through the entire length of the shaft—nearly 600 fms., lodes which have been enormously productive to the mines adjoining. Its geological position and local advantages are all that could be desired—strata of the stanniferous kind, peculiar to the district, and full of strings of tin, granite cropping out near the north-west boundary, and surrounded with old tin mines, the resources of which were known to the Phoenicians, and whose continuous wealth demonstrate inexhaustibility. The deep adit and the great cross-course are advantages which must not be overlooked; the former effectually draining the mine, and the latter greatly facilitating the cross-cutting to the various lodes, and effecting the saving of an enormous expense. These advantages, coupled with the present high price of tin, constitute West Polbreken one of the best tin sets brought before the public for many years past. It is expected that the share list will be closed within another fortnight.

**SOUTH BASSET.**—These shares are very low in price; the mine adjoins Wheal Bassett, Wheal Baller, and South Frances, which mines have given 724,117. 11s. dividends, on an outlay of 13,300. South Basset is in 512 shares only, with 161. 10s. 8d. called up on each share; it embraces the same lodes as Wheal Baller and South Frances, and parallel lodes to Wheal Bassett. The prospects are good: a lode may any day cut rich, and cause shares to jump up 500. in a few days; they are now about 81. per share.

**EAST WHEAL LOVELL (near Helston).**—It is gratifying to learn how perseverance is rewarded at times. About eighteen months or two years ago this mine was very poor. Some of the shareholders refused to respond to the calls, and strained their nerves to the utmost to stop the mine, and the shareholders had in his integrity and judgment, the mine was carried on. The result is, a rich lode of tin has recently been discovered, worth at least 1000. per fathom, to the extent of the ground laid open, which is several fathoms in length, and 10 fms. in depth, with every appearance of this very rich lode continuing. It is reported that at the quarterly meeting, to be held next month, this mine will commence paying dividends, and it is to be hoped it will continue to do so for many years to come, and rival some of the neighbouring mines, which have paid immense profits in days past. This district has been pre-eminent for its rich tin mines during the last century. One of the neighbouring mines returned upwards of 3,000,000. sterling in 32 years, when tin was only about one-half its present value.

**CLIJAH AND WENTWORTH MINES.**—These mines, it is said, are now paying cost, and at the next meeting it is hoped a dividend will be declared. The mine has improved throughout, and the cross-cut, 80 fms. deep and 200 fms. long, has now so nearly reached the objects for which it was intended—to cut the Great Wheal Tny, Chagor, and the Great Wheal Basset lodes—that day by day they are expected to be intersected. Every indication promises success. Nearly 100,000. has been spent from calls and returns in opening up this property, and the agents state their belief that the adventurers will be well repaid for their outlay.

**WHEAL ALFRED JAMES (St. Dennis).**—By an announcement in the Journal, I learn that this mine is for sale. Perhaps you will, therefore, allow me space to explain my views as to its prospects. From what I have heard, they sink their shaft 20 fms. below surface, and the advertisement says they have four known tin lodes and one copper lode within the limits of the sett. Two of the lodes have been intersected, and found to be rich for tin. No doubt it would be proper for me to say that I have no connections with the Wheal Alfred James Company, neither do I know any of the parties connected, but I am led to make these remarks from my own personal knowledge of the district, having been over the ground many a time, and very carefully inspected the strata, &c. Now, Sir, as to the geological formation of the sett, there cannot be better, and in which are found the largest metaliferous deposits; it is situated directly under the Cambrian, and the strata are of the same age as the Cambrian, and so has Wheal Alfred James. Besides this, there has been so much tin raised by the streamers as in that district? Since there is an engine erected and two good lodes cut, I do hope, for their own interest and the character of the district, that some parties will be found to assist in a spirited working, as I am confident they will be well paid. The main lode, called the Blue lode, is further south than their shaft. About 40 years ago a mine was set to work near a mile east of Wheal Alfred James, on which a water-wheel was erected, a shaft sunk 12 fms. deep, and two lodes cut into; one of the lodes was a tin lode, 7 feet wide, containing good work, and the prospects thought very promising. On this lode, in driving on their remaining balance, they cut into a copper lode, which was from 10 to 12 feet wide, composed of copper, mudiic, spar, peach, &c., with good indications of a large deposit of mineral; but, unfortunately for the shareholders, they had no means to erect steam-power, and the water increased in the bottom and decreased at surface as the summer set in, when the mine was "knocked." Now, this has been the trial so far in this rich district. I thought also to say that these two lodes pass right through the Wheal Alfred James. I doubt if ever there were so good indications in any district so shallow as those referred to.—THOMAS PARKIN: Royalton Mine, Aug. 6.

**WHEAL IDA SILVER-LEAD MINE** is in the parish of St. Ive, Cornwall, about one mile north of Wheal Ludcott, and half a mile south-east of South and East Caradon, consequently in a good district. The shaft is now 6 fathoms down, sinking in a fine channel of ground. A lode containing silver-lead ore was cut close to surface; this same lode they expect to meet with 20 fathoms down. It is a first-class speculation, and shares can be bought at a few shillings each.

**GOLD MINING IN WALES.**—Although the Cambrian Consolidated Mining Company has not yet reached a profitable position, the prospects of successful results being ultimately secured are in no way diminished, and the extremely small price of the shares in the market is no criterion whatever of their real value. It appears that the amount originally subscribed for working capital was 25,000., of which about 6000. has been expended opening up the mines, erecting wheel, machinery, &c.; and the remaining balance is on deposit at the current rate of interest. The costs in future will be about 4000. per month, so that there are ample funds available for all purposes. Two of the directors, accompanied by Mr. J. C. Goodman, the secretary, have recently visited the property; and the directors are quite satisfied with the work done upon the five different mines belonging to this company, as well as in the erection and efficiency of the houses, water-wheel, pumping, stone breaking, and other machinery just completed. From their own observations, backed by the opinions of their agents and others, and also strengthened by the new discovery of a lode carrying rich visible gold in a sett almost adjoining their Cambrian Mines, they consider that, with the present management, and carrying on operations (more particularly in gold mining), there are no reasons for any diminution in the hopes entertained.

**SOVEREIGN GOLD MINE.**—The report of Mr. C. R. Dixon, the manager, states that the property is situated almost in the centre of the gold-bearing range of mountains, about 10 miles to the north of Helston, and it is proved to contain, in the north, and portions to which he has been principally directed, five distinct lodes, all highly mineralised, and showing indications of gold. After a careful examination of the property, operations on a small scale were commenced by him, about the middle of last February, by opening on the before mentioned five lodes. With the view of properly testing in bulk the value of the different lodes in the sett, he advised the immediate erection of a small water-wheel, and a battery of four heads of stamps. The Roman lode will be cut in a fortnight, and he urged upon the directors to have the machinery ready as soon as possible after that is effected. Upon the receipt of Mr. Dixon's report, the directors invited tenders for the erection of the necessary machinery. Mr. G. F. Goodman has been appointed secretary.

**WEST POLBREKEN.**—From enquiries made at the office of this company 13, Buckenbury, we find that the share list will shortly be closed. The specimens of rich tin ore from the mine are positive indications of the good results which will accrue to the shareholders on this first-class property being vigorously worked, and the shareholders ought to congratulate themselves on being associated with so highly-promising an adventure.

**WHEAL PRUDENCE.**—Advantage has been taken of the fine weather of the last three or four months to push on the surface operations as much as possible, and it is surprising to see the amount of heavy work got through since we last visited the mine. The engines, Messrs. Mitchell and Joplin have recently got to work one of their high-pressure expansive condensing-engines for winding and other purposes, which, on inspection, we found to be working with great smoothness, and consuming but a very small quantity of fuel. At the engine-shaft we found the water to be in fork, and steps are being taken to sink this shaft as quickly as possible to the intersection of the lode with the second elvan course, where a large deposit of copper ore may be reasonably expected. Indeed, the top of this course of ore has been already discovered, and the workings drained by the last company by virtue of flat-rods; but frequent accidents attendant on this mode of working involved expenses which eventually exhausted the resources of the company, and brought the mine to a standstill. The present management will, consequently, not repeat the error of their predecessors, but sink the engine-shaft 20 fms. instead, which will unwear the old workings, give 10 fms. of backs, and enable the ore to be worked away at a profit, instead of stopping the bottoms of the levels, as heretofore. This, then, is one of the leading features of Wheal Prudence, but by no means the most important. A cross-cut has been commenced in the 42, to intersect the Great St. George lodes. It should be remembered that these are the champion lodes of this mining district, and in St. George gave 300,000. profit on an outlay of less than 25,000. To more effectually work these lodes, one of which is 8 ft. in width, the western part of the St. George Mine has just been purchased by the Wheal Prudence Company, and we are informed that operations are to be commenced here also as soon as possible, thus doubling the chances of reaching one of those great metaliferous deposits for which St. George has been so famous. It is in this piece of ground that the celebrated Cligga Head is situated. The granite forming this singular headland (or pen, in the old Cornish language) crops out from under the sea; and, had it not protruded itself in this unusual manner, there would be no reason for suspecting any granite being within several miles; but, fortunately for the mines of this district, such is the case, and the extraordinary yield of copper in St. George and Wheal Prudence can only be attributed to their proximity to the junction of the granite and schists. We understand the Wheal Prudence is worked by a Leeds company, and, having known the mine many years since, we are glad to congratulate the company on the chances before them of a successful result from the present mode of working this valuable mineral property. Other mines in the neighbourhood are looking well. At WHEAL HOPE the water is in fork, and some 30 tributaries are at work, at about 8s. in 11. New ground is being opened out, so that more tributaries will soon be at work. This mine, so far, has exceeded expectations. At WHEAL KITTY, on the same run of lodes as Wheal Prudence, they have a rich and permanent mine.

Now ready, and to be had of all booksellers,  
THE ANNUAL MINING REVIEW—Price 1s.  
THE ANNUAL STATISTICS OF MINING—Price 6d.  
London: Published at the Mining Journal office, 26, Fleet-street.

**MANCHESTER GEOLOGICAL SOCIETY.**—The "Transactions" of this Society, containing the proceedings of the meeting on June 30 last, has just been issued, and contains two very valuable papers, and the discussion which took place with reference to them. The first, by Mr. J. Plant, "On the Effect produced by Heat on Bowley Rag, and the practical application of its products to useful purposes," is interesting from its bearing upon the utilisation of blast-furnace slags. The second, by Mr. Joseph Goodwin, is "On the Liberation and Drainage of Gases from Coal Mines." The paper is a highly important one, and the discussion which followed

the reading of it points out extensive fields for useful research. The number of the "Transactions" can be obtained from our office, by forwarding seven postage stamps.

## SILVER VEIN MINE.

The following report, from Capt. Charles Thomas, is an interesting and most important continuation of the remarks made at the general meeting, held on the mine, by practical and experienced miners, and which were given in our last number. The operations at Silver Vein are assuming great character, especially in a mineralogical point of view; while Capt. Charles Thomas considers there is every expectation of its becoming a mine of value at greater depth. We propose, however, to enlarge on this subject on a future occasion, and will not, therefore, now go into details:—

Killisnoe, Camber, Aug. 4.—I inspected this mine on July 30.—Two lodes are discovered; the bearing of one is about 15° south of east, underlies north, composed mostly of feldspar and a little mudiic, of no value near the surface nor at the 20, where it is explored 3 fms. east from the main lode. The main lode varies in width from 3 to 5 ft.; the bearing is about 22° east of north; the underlie east is 4 ft. in a fathom. The lode stone is good quartz and gossan down to the depth explored to the depth explored—strong lode. The 20 is driven north of engine-shaft 33 fms., which yielded ore of value for stopping for nearly 30 fms.; the lode in the end, and the last 8 fms., though of a promising character, does not contain ore enough to pay for working; driving by six men, at 21. 10s. per fm. The 30 is driven north of shaft 31 fms.; and a winch holed from the 20 fm. level, 1 fm. behind the end; the lode is cut through 3 fms. behind the end, where it is worth 81. per fm. Two tribute pitches are being worked in the back of this level, by three men, at 8s., and two men, at 6s. 6d. in 11.; the length of ore of value discovered in this level is 30 fms., with good prospects of continuing of value northward further still; driving by three men and three boys, at 21. 10s. per fm. The 30 is driven south from shaft 20 fms., mostly in the feldspar by the side of the lode; the lode where cut through partakes of the general character of the north levels, but is not of value for working—suspended. The 40 is driven north from shaft 2 fms., and south from shaft 2 fathoms; the shaft is sunk 6 ft. below the 40; the lode is cut through near the shaft several feet in length. Northward, where it can be most distinctly seen and more fully examined, the lode is 4 ft. wide, and contains ore throughout the entire length taken down, showing no falling off in the value or prospects for deeper sinking. In the 30 the lode has improved much in value in driving a few fathoms north from the shaft, which is also likely to occur at the 40; nine men are employed at this level, the cost of driving north being 21. per fm., and cutting plat by contract for 161. From the above report it will be seen that the explorations are not yet of much extent, the depth being 40 fms., and the length from end to end about 50 fms., and that the south ground, except near the surface, has not been found of value. Ore of value, therefore, being laid open for future supplies for sale depends at present on driving the 30 and 40 north, the 20 being unproductive just now. There is a fair quantity of ore discovered in the back and bottom of the 30 to be worked away at will. Under these circumstances regular sales of ore can be kept up, but until a greater number of points are brought under operation ground of this value cannot fairly yield ore enough to meet the current cost. The main object, therefore, to be kept in view and acted out should be to open the mine by sinking and driving as fast as possible. If a great extent of such ore as that in the 30 can be brought under operation, say in four ends of levels instead of two, the mine would give fair profits. With these views and opinions I recommend the continued sinking of the engine-shaft to the 30, and the driving of the 30 and 40 north and the 40 south as fast as possible, and that a new shaft be commenced forthwith from surface at about 40 ft. north of the engine-shaft, to be sunk on the course of the lode, after a perpendicular of 12 or 14 fms. is sunk from surface. That would greatly facilitate the explorations of the mine by giving full ventilation and the means of drawing freely all the ore raised. Unless a very rich mine is discovered, you can never have a profitable mine with one shaft only. Your agent suggested the propriety of erecting a water-wheel, with a crusher attached, for crushing the ore instead of bruising by hammers. I think the water drawn out of the mine, if used to turn a wheel of 24 ft. diameter, 2 ft. breast, would be equal to crushing much more than the present yield of the mine. Besides the halvans now laid aside, it could, with a crusher, be worked at a profit. I think the cost of such a crusher would be met by the halvans, and saving of manual labour in one year, and so much added to the mine, the pump engine is of power enough to sink the mine 30 fms. deeper. A steam-engine for drawing the ore would be an advantage, as well as a means of economy, cheaper than horse labour; but this might be postponed until the engine-shaft is sunk 10 fms. deeper, and the new shaft brought into working order. The mine is wholly in clay-slate. In the deepest part at the 40 it is more congenial for lead than above; a little of that has been dug out of a branch near the lode at the 40. The direction or bearings of the main lode is very suitable for lead ore. No decided opinion as to the future yield of lead can yet be given, but the indications are favourable for yielding that ore at greater depths, and if so, we may hope it will be rich in silver, abounding in the gossan near the surface, and with the copper in the mill. Altogether I consider the mine an interesting one, well worthy of a vigorous trial.

## DETERMINATION OF THE ILLUMINATING POWER OF MINERAL OILS.

The true test of the actual monetary value of an illuminating oil is a subject of great practical importance. It is obvious that the relative dearth or cheapness of any two samples of oil cannot be determined by comparing their cost per gallon, but must be ascertained by measuring their illuminating power. Thus, two oils may be sold at the same price per gallon, but if one gives one-third more light than the other, it will obviously be to the consumer a much cheaper oil. The mode in which the relative illuminating power of any two or more samples of oil is ascertained is, in reality, not a difficult process; it is one that any intelligent person who possesses a fair balance can readily perform, and thus arrive at a satisfactory conclusion respecting the value of the oil submitted to the examination. During this week we have been examining the illuminating power of Young's paraffin oil, as compared with that of some of the lighter petroleum oils in the market. This examination was conducted as follows:—Two lamps of precisely similar character were filled with the oils to be compared, they were then carefully weighed, so as to ascertain their weight to a single grain. The lamp A, filled with Young's paraffin oil (specific gravity .825), weighed 7039 grains. The lamp B, with light mineral oil (specific gravity .810), weighed 6789 grains. The lamps were then placed close together on a table, and at an equal distance from a sheet of white paper pinned against the adjoining wall. At a convenient distance between the lamps and the sheet of paper a perpendicular bar was so placed that the shadows cast by the two lamps were in actual contact. In the experiments in question this arrangement was made by leaning the long handle of a carpet-broom against the edge of the table, the head resting on the floor. The flames of the two lamps were so adjusted by turning the wicks up or down that the shadows cast were of perfectly equal depth, proving the flames to be of equal illuminating power. After burning for more than an hour, the two flames were extinguished at the same moment, and the lamps with their contents again weighed. The lamp A was found to weigh 6797 grains; this amount subtracted from the original weight proved that 242 grains of oil had been consumed in one year, and so much was left, proving that it had consumed 334 grains of oil. Hence it follows that 242 grains of Young's paraffin oil gave out an equal amount of light to that furnished by the combustion of 334 grains of the lighter oil; if to this difference be added 2½ per cent. for the difference in specific gravity, the experiment, so far as this particular sample of mineral oil is concerned, proves that one gallon of Young's oil is equal in illuminating power to one gallon and four-tenths, or more than one gallon and a third, of the mineral examined. It is but fair to state that the mineral oil was not of the best quality, its specific gravity was only .810, and its illuminating point was as low as 100° F., a point at which oil cannot be regarded as safe in general use. On the other hand, it is right to state that Mr. Young claims for his oil a greater illuminating power than that possessed by any other oil. On this point we are about making a series of comparative experiments, and shall lay the results before our readers.—*Old Trade Review.*

**THE TIN STANDARD.**—We regret to announce that on Monday last the standards of tin ore were reduced 8s. per cwt., as follows:—Common, from 109s. to 107s.; superior common, 110s. to 108s.; second fine, 112s. to 109s.; superior fine, 115s. to 112s.—*West Briton.*

**PRACTICAL MINING AGENT.—WANTED,** an EXPERIENCED MINER, to UNDERTAKE THE GENERAL MANAGEMENT of the RHEIDOL UNITED SILVER-LEAD MINES, near ABERYSTWYTH.—Applicants must thoroughly and practically understand mining in all its departments.—Apply, with testimonials and salary required, to Mr. WALTER H. PHILLIPS, solicitor, 43, Temple-street, Birmingham.

**WANTED, ONE OR TWO PARTIES TO JOIN THE ADVERTISER IN EXTENDING THE WORKING OF A MINE,** now carried on to a profit, and to FURTHER DEVELOPE THE MINERALS of an EXTENSIVE ROYALTY.—Address, "A. P." Box 22, Post-office, Ulverston, Lancashire.

**WANTED, a FOREMAN and MANAGER of IRONWORKS,** who thoroughly understands the manufacture of iron work in all its branches, including roofs, bridges, conservatories, heating, &c., can make drawings and estimates of the same, and superintend the carrying out of the work.—Address, stating terms, qualifications, and where last employed, to "H. S." 37, Grafton-street, Dublin.

**WANTED TO HIRE, with the option of purchase, a NARROW GAUGE LOCOMOTIVE for a MINERAL BRANCH RAILWAY,** not exceeding 3 tons weight. It is required to be fitted with sufficient brake power, and all necessary appliances. To be delivered at Llanelli.—Apply, stating size of cylinder and price, and terms of payment, to C. HILL, Esq., Ferriside, Kidwelly, South Wales.

**CLERK WANTED at the PHENIX MINE, near LISKEARD,** fully competent to keep the accounts of the mine.—Apply by letter, stating age, where last employed, and salary expected, to H. HARRIS, Esq., Carlton Chambers, 12, Regent-street, London, S.W.

**WANTED.**  
**RUNCORN SMELTING WORKS, NEAR LIVERPOOL.**—Mr. PEMBROKE JONES having succeeded Messrs. James Stubbs, Price, and Co. in the above works, is in WANT OF ROUGH LOW PRODUCE LEAD ORES, and would be happy to receive samples from the various mining companies, addressed Lead Works, Runcorn, Cheshire.

**TIN MINE.**—Some parties having laid out a considerable sum in working the above, joining a dividend mine of high standing, are now DESIROUS TO DISPOSE OF A PORTION OF THE PROPERTY to parties willing to lay out £1800 for its further development.—Address, "N. W. G." Post-office, Lostwithlie, Cornwall.—August 6, 1863.

**TO SPECULATORS.**—The ADVERTISER, a retired mine captain of great practical experience in Cornwall, is in a POSITION TO GIVE THE NAMES OF SIX PROGRESSIVE MINES which are SAFE in his opinion (founded on a perfect knowledge and reliable data) to ADVANCE HUNDREDS PER CENT. IN A FEW MONTHS. Terms, commission on profit.—Address, "Investor," *Miners Journal* office, 26, Fleet-street, London, E.C.

**METAL TUBES AND CYLINDERS.**—The ADVERTISER has COMPLETED AN IMPROVEMENT IN MACHINERY FOR MANUFACTURE OF SAME, which is protected at home and abroad. He is now DESIROUS OF JOINING with a CAPITALIST TO FURTHER THE UNDERTAKING, with promise to be a valuable one. A machine is ready for view.—Apply to Jno. KEE, 30, East-row, Birmingham.

**MR. GEORGE SHEPHERD, CIVIL MINING, AND CONSULTING ENGINEER.**  
Letters addressed 26, Throgmorton-street, London, E.C.



## British Association for the Advancement of Science.

**BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.**—THE NEXT MEETING will be held at NEWCASTLE-UPON-TYNE, commencing on WEDNESDAY, August 26th, 1863, under the presidency of Sir W. G. ARMSTRONG, F.R.S.

Notices of communications intended to be read to the association, accompanied by a statement whether or not the author will be present at the meeting, may be addressed to G. GARRATT, M.A., Assistant General Secretary, or to Capt. NORMAN, AUGUSTUS H. HUGHES, Esq., R. C. Clapham, Esq., local secretaries, Westgate-street, Newcastle-upon-Tyne.

## British Association for the Advancement of Science.

**BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.**  
THIRTY-THIRD MEETING, TO BE HELD AT NEWCASTLE-UPON-TYNE,  
26th AUGUST, 1863.

Secretaries' Offices, Literary, and Philosophical Society,  
Westgate-street, Newcastle-upon-Tyne, July, 1863.

The MEETING of the British Association for the Advancement of Science for this year will be held at NEWCASTLE-UPON-TYNE, and will commence on WEDNESDAY, the 26th August next, under the presidency of Sir WILLIAM ARMSTRONG, Bt., &c. On this occasion it is expected that many of the corresponding members of the association (to all of whom invitations have been sent), and a large number of British members will be present.

Invitations have been accepted to visit the lead mines of W. B. Beaumont, Esq., as well as the Cleveland iron districts, at the request of the Corporation of Middleborough. The Mayors of Sunderland and South Shields have kindly expressed a desire to receive and assist in promoting the views of such members as may visit their respective boroughs.

Excursions have been arranged to the Northumberland Lakes—the Canobie coal-field—and the necessary means taken to secure ready access to the leading Mining and Manufacturing Establishments of the District, embracing, in addition to Mines of Coal, Iron, and Lead, very extensive Works for the production of Chemicals, Machinery, Glass, Iron Vessels, Fire Clay, &c.

The time appointed for the meeting is thought to be convenient for members of the Foreign and British Universities, and the facilities for travelling to Newcastle-upon-Tyne, especially from the continent of Europe, are now very complete.

Both the general and local officers will exert themselves to make the visit of their associates both agreeable and satisfactory, and it is expected that the gathering at Newcastle-upon-Tyne will be in great numbers and of unusual interest.

Communications intended for presentation to any of the sections may be addressed to the local secretaries, and should be accompanied by a statement whether the author will be present, and on what day of the meeting, so that the business of the sections may be properly arranged.

As the objects of the association are especially scientific, papers on history, biography, literature, art, &c., are necessarily inadmissible.

Gentlemen may be proposed as life members on payment of £10. Subscriptions for new members, £3 for the first year. Subscriptions for old members, £1. Payments of associates of the meeting, £1. Ladies' tickets (obtained through a member), £1.

Names of candidates for admission are to be sent to the local secretaries.

For any further information respecting the local arrangements, lodgings, or other matters, applications may be made to the local secretaries, and tickets will be issued to the members, on application, to enable them to travel to and from the meeting for one fare over the chief railways.

**THE WEST POLBREEN TIN MINING COMPANY**  
(LIMITED), ST. AGNES, CORNWALL.  
Incorporated under the Companies Act, 1862.

Capital £200,000, in shares of £1 each.  
Deposit on application 5s., and 1s. on allotment. No further calls to be made for twelve months.

**DIRECTORS.**  
EDWARD W. BURLS, Esq., the Villa, Erith.  
H. L. PHILLIPS, Esq., 8, London-street, Fenchurch-street, London.  
DAVID GRIMMETT, Esq., 2, King's-row, Walworth, London.  
JOHN WARD, Esq., (firm of Ward Brothers), 56, Bartholomew-close, London.  
W. C. PAUL, Esq., 79, Queen's-road, Bayswater, London.

**BANKERS**—Roberts, Lubbock, and Co., 15, Lombard-street, London; Williams and Co., Miners' Bank, Truro, Cornwall.

**SOLICITORS**—Messrs. Waller and Kelly, 2, Duke-street, Adelphi, London.

**AUDITOR**—Charles Warwick, Esq., 25, Bucklebury, London, E.C.

**SECRETARY**—Mr. T. Cartwright.

**OFFICES**—19, BUCKLEBURY, CITY.

This company is established to purchase and work a very valuable tin mine at St. Agnes, Cornwall, known as West Polbreen.

Its geological position is first rate, being surrounded by the most productive mines of this celebrated district, and possessing 13 champion lodes of great richness and value. The mine will be easily and very cheaply worked, sales of tin will be soon made, and no call will be required for 12 months.

The last sale of tin paid its cost, and it is fully expected that in a short period the mine will be giving very handsome profits.

The vendors of the property are so confident in the success of the mine, that they have sold their entire interest in it for 2200 paid-up shares. This is a very satisfactory arrangement, as they have expended a deal of capital on the property, and made it nearly self-supporting.

A most valuable cross-course intersects all the lodes. The miners are now driving the level on May's lode towards it, and opening up rich and profitable tin ground, which is improving every week (see weekly report from the mine). In a short time the celebrated Dorcas lode will be cut, and it is believed will at once give immense returns.

The directors submit this property to the public with the greatest confidence. A considerable number of shares have been already subscribed, and immediate application is requested for the remainder.

Magnificent specimens of the ore may be seen at the office of the company, where prospectuses, plans, reports, and every information may be readily obtained.

**THE KYFFHAUSER MINING AND SMELTING COMPANY**  
(LIMITED), MANFELD DISTRICT.  
To be incorporated under the Limited Liability Act.

Capital £200,000, in 10,000 shares of £20 each. Deposit, £1 per share with application, and £1 10s. per share on allotment.

Further calls not to exceed £3 per share. It is not probable that more than £15 per share will be called up.

**DIRECTORS.**  
CHAIRMAN—The Right Hon. LORD DE MAULEY, Director of the Submarine Telegraph Company.

BARON PHILIP DE REUST, Mineral Proprietor, Altenburg.

HERR W. VON BORN, Banker, Dortmund.

ERNEST ALERS HANKE, Esq., Gresham House, Old Broad-street.

THEOPHILUS CLIVE, Esq., Director of the Northern Railway of Buenos Ayres.

ALFRED ELBOROUGH, Esq., 17, King's Arms-yard.

LORD GEORGE CHAR. GORDON LENNOX, M.P., 51, Portland-place, W.

J. H. MACKENZIE, Esq., Deputy-Chairman of the London and Lancashire Life Insurance Company.

H. A. MURRAY, Esq., 68, Park-street, Grosvenor-square, W.

His Excellency CHARLES SCHEIDT, Minister of the Interior to H.R.H. the Prince of Schwarzburg-Rudolstadt.

HERR B. G. WEISSMULLER, Linen, Director of the Westphalian Ironworks.

**BANKERS.**  
The Alliance Bank of London and Liverpool (Limited), Lothbury, London, and Brown's-buildings, Liverpool.

**SOLICITORS.**  
Messrs. Ashurst, Morris, and Knight, 6, Old Jewry.

**MANAGER.**  
Messrs. Joshua Hutchinson and Son, 15, Angel-court.

**LONDON MANAGERS.**  
J. H. MURPHY, Esq., 8, Austinfriars, E.C.

**OFFICES**—8, AUSTINFRIARS, LONDON, E.C.

The Mansfeld Copper-Slate Mines and Smelting Works, in Prussian Saxony, have been in operation upwards of 600 years, and are among the most extensive works of the kind in the world. The returns and profits that have been and are being made are enormous, and yet, it is said, that only 50 per cent. of the ore has up to this time been removed. The dividends paid have also been very large, at present amounting to about £70,000 per annum; while the value of the shares (780 in number) has gradually risen to the present price of about £160 each, or representing a total value of upwards of £1,200,000. The company employs 4500 men, which directly represent 13,915 individuals, including women and children.

This company is established for the purpose of purchasing the Kyffhauser concession, which embraces the entire sub-principality of Frankenhause, and includes an area of upwards of 16,000 acres, already proved to be mineral ground, and is most conveniently situated at almost equal distances from Halle, Brunswick, and Erfurt. The object of the company will be to carry on mining and smelting operations in a similar manner to that in which it is done at Mansfeld.

The Kyffhauser deposit is identical with that of Mansfeld. Part of the copper-slate lies above the level of the valley, and part below it. The area of the former portion alone is many square miles, and the quantity of ore to be obtained from it alone will suffice for the most extensive mining operations for a period of which we are not likely to see the end. Mr. Jervis remarks that "the extent of the strata is not inferior to that of the ground at present considered to be the Mansfeld Mines, in the Elisen Basin; and when it is recollected that, after six years and a half centuries of the most unintermitting activity and perseverance, the Mansfeld Mines are so far from being exhausted that only 50 per cent. of the ore has yet been removed, speculations as to the duration of the Kyffhauser bed would be as futile as to the duration of a coal bed."

Mr. Jervis states that as regards "the success to be expected from the Kyffhauser Mines, there is little doubt that, with proper administration, and a not too rash commencement, they would afford as secure an investment as a bank;" and, taking the returns at the moderate quantity of 500,000 centners of ore per annum (those of Mansfeld having been for many years upwards of 1,000,000 centners, or considerably above 80,000 English tons), he estimates the annual profits of Kyffhauser at £47,500, which would be about 25 per cent. on the whole nominal capital, or a larger rate on the amount likely to be called up. Subsequent calculations, showing a considerable reduction in expenses, justify the directors in holding out the prospect of a much larger percentage.

The concession is held in perpetuity from the Prince of Schwarzburg-Rudolstadt, at a tax of 6 per cent. on the net profits, the Mansfeld Company paying taxes on their net profits of 27 per cent.

The company is divided into 10,000 shares of £20 each, £1 per share to be paid with application, and £1 10s. on allotment. Further calls will not exceed £3 per share, and at intervals of not less than two months; it is not probable that more than £15 per share will be called up. The directors will proceed so soon as in their opinion sufficient capital is subscribed. If no allotment is made the deposit will be returned in full.

Shareholders can pay up the calls in advance, and in full, for which interest at the rate of 5 per cent. will be given.

Detailed prospectuses, with copies of Mr. Jervis's report, and forms of application for shares, can be obtained at the office, 8, Austinfriars, E.C., and from the brokers.

## India Office.

**BY ORDER OF THE SECRETARY OF STATE FOR INDIA**  
IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 24th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—  
BOLT, SHEET, and INGOT COPPER.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 24th day of August, after which hour no tender will be received.  
GEO. HUMPHREY, Chief Clerk.  
India Office, August 13, 1863.

## THE MASTER OF THE ROLLS AT CHAMBERS.

**IN THE MATTER OF THE JOINT-STOCK COMPANIES**  
WINDING UP ACTS, 1848 and 1849, and 1857, and in the MATTER of the NORTH WHEAL EXMOUTH MINING COMPANY.—Upon the application of the official manager of the above-named company, and upon reading the London Gazette of the 14th and 17th days of July, 1863, the Times newspaper of the 10th and 17th days of July, 1863, the Mining Journal newspaper of the 11th and 18th days of July, 1863, the Western Times of the 10th and 17th days of July, 1863, and the affidavit of the said official manager, sworn this day, and the schedules or exhibits respectively marked A, B, C, and D, therein referred to, and the affidavits of Henry Thomas Vivian, sworn this day, and the exhibits respectively marked A and B, therein referred to, and now on the proceedings in this matter, it is peremptorily ordered that a CALL of TWELVE SHILLINGS PER SHARE be made on all the contributors of this company who have been settled on the list of contributors, and it is peremptorily ordered that each of such contributors do, on or before the 24th day of August, 1863, pay to Frederick Whinney, the official manager of the said company, at his office, No. 5, Serle-street, Lincoln's Inn, in the county of Middlesex, the balance (if any) which will be due from him after debiting his account in the company's books with such call.

FREDK. WHINNEY, 5, Serle-street, Lincoln's Inn, Official Manager.  
F. W. SNELL, 1, George-street, Mansion House, Solicitor.  
Wednesday, the 29th day of July, 1863.

**TO STEAM ENGINE MANUFACTURERS.—TENDERS**  
REQUESTED FOR THE SUPPLY AND ERECTION of a simple action PUMPING ENGINE, calculated to raise 70 cubic metres (French) of water per hour, with power to raise 100 to 110 in case of need. The present depth of the mine is 130 metres, but it is intended to sink to 250 metres. Diameter of pump buckets ("plongeurs") to be 0.35 metres; stroke, 3 metres. Tenders to specify the general plan of the engine, as well as for estimating the cost of erection, &c.; also, the speed and diameter of the cylinder, the number, weight, dimensions of the boilers ("generateurs"), the interior steam pressure, the guaranteed consumption of fuel measured by the water raised, the time required for the delivery and erection of the engine. Tenders to be sent, post paid, to Monsieur A. COMANIER, gerant de la mine de Pont Pen, Rennes, Ile et Vilaine, France.

**TO IRON FOUNDERS, IRON MERCHANTS, ENGINEERS, AND OTHERS.—A LARGE IRON FOUNDRY**, in full operation, with PLANT, ENGINE SHOP, WAREHOUSE, STOCK, &c., in the neighbourhood of Edinburgh, FOR SALE, BY PRIVATE CONTRACT. The works are well known, established about 30 years, have an extensive local trade, and are exceedingly well situated for the London and continental markets. A more desirable opening is rarely to be met with. The most satisfactory reasons will be given for the sale, and full particulars will be afforded on application to Mr. HENRY ROGERS, 43, Upper Thames-street, London.

**TO CAPITALISTS.—SLATE AND SLAB QUARRY.**  
WANTED, ONE OR TWO respectable PARTIES, to JOIN THE ADVENTURER IN EXTENDING AND ENLARGING one of the most PROMISING SLATE AND SLAB QUARRIES IN NORTH WALES. The proprietor is now working one quarry on the grant, which is producing a very extensive number of first-class slates and slabs, and is paying well. References can be given if required. None except respectable capitalists need apply.—Address, "H. G.," MINING JOURNAL office, 26, Fleet-street, E.C.

**GERMAN CHEMIST AND METALLURGIST**, of practical experience in the manufacture of iron, and provided with the highest testimonials, is DESIROUS of a SITUATION in an IRONWORK.—For full particulars, apply to "T. B.," 21, Canterbury-place, Lambeth-road.

**A PARTNER WANTED.—A MECHANICAL ENGINEER** IN THE NORTH OF ENGLAND, having wharfed manufacturing premises, REQUIRES A PARTNER TO ATTEND TO THE BUSINESS IN LONDON, with a moderate capital.—Apply to Mr. ALFRED RAWLINSON, 28, John-street, Bedford-row, London.

**A PRACTICAL MINING CAPTAIN WISHES TO ENGAGE** WITH A COMPANY, to go abroad or at home. He is well acquainted with the erecting of machinery. Can produce a 10 years' character from his employers. Not particular to any country.—Address, "K. F.," MINING JOURNAL office, 26, Fleet-street, London, E.C.—August 6, 1863.

**SOUTH WALES.—A GENTLEMAN**, for some years and at present residing at Swansea, with an extensive connection and large local experience, is DESIROUS of PROCURING for himself AGENCIES TO REPRESENT, in Swansea and South Wales, either by salary or commission, FIRST-CLASS FIRMS, where business enterprise, strict reliability, and local knowledge, are a desideratum. Ample security, and unexceptionable reference, can be given.—Address, "L. M.," Post-office, Swansea, South Wales.

**SLATE QUARRY AND GOLD MINE.—THE LESSEES** OF VERY VALUABLE SLATE ROCK AND MINING PROPERTY, situate in the centre of the Merionethshire gold district, and within three miles of a shipping port, are PREPARED TO DISPOSE OF PART OF THEIR INTEREST in the same, on very easy terms. There is every facility for opening an extensive quarry. Several gold-bearing lodes also run through the property.—Address, "C. M. U.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

**QUARRY INSPECTION.—A practical quarryman**, who is well acquainted with all the quarries in North Wales, as well as several in Devonshire and Cornwall, OFFERS HIS SERVICES TO INSPECT SLATE QUARRIES, and to furnish truthful reports thereon. Highly respectable references given if required.—Address, "Quarryman," MINING JOURNAL office, 26, Fleet-street, London, E.C.

**AGENT FOR SALE OF A SLATE QUARRY IN NORTH WALES.—A COMPANY** HAVING EXPENDED THEIR CAPITAL IN OPENING A QUARRY, which has yielded about £1000 worth of slate per annum, WISH TO SELL IT.—Persons willing to undertake the sale are requested to send references as to their efficiency and respectability, addressed to Mr. TITRELL, 19, St. George's-terrace, Heme Bay.

**THE NEW CORNISH LEAD AND COPPER MINING COMPANY (LIMITED).**—Notice is hereby given, that a first CALL of TWO SHILLINGS AND SIXPENCE PER SHARE has been made by the directors of this company on all the shares in this company, Nos. 5002 to 12,000, both inclusive, such call to be paid to the bankers of the company, Messrs. Atwood, Spooner, Marshall, and Co., at their banking house, in New-street, in the borough of Birmingham, in the county of Warwick, on or before Thursday, the 27th day of August, 1863.

By order, J. CHAMBERLAIN BARLOW, Sec.

Offices, No. 20, Waterloo-street, Birmingham, July 27, 1863.

**WICKLOW COPPER MINE COMPANY (LIMITED).**  
Notice is hereby given that the NEXT and FINAL MEETING of the shareholders of the Wicklow Copper Mine Company (Limited), previous to amalgamation with the Hibernian Mine Company, under the 26th and 27th Vic., c. 209, will be HELD at the company's office, 43, Dame-street, Dublin, on Monday, the 31st inst., at One o'clock P.M. precisely, for the purpose of receiving the directors' report and final statement of the accounts of the company.  
The Transfer Books will be closed from the 21st to the 31st inst., both days inclusive.  
Dublin, August 8, 1863. By order, HENRY A. CRUISE, Secretary.

**CLARENDON CONSOLIDATED MINING COMPANY OF JAMAICA (LIMITED).**—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the Clarendon Consolidated Mining Company of Jamaica (Limited) will be HELD at the offices of the company, as below, on MONDAY, the 17th August next, at One o'clock precisely, for the purpose of considering, and, if deemed expedient, of confirming a resolution passed at an extraordinary general meeting of the company, held at the company's offices, on the 15th June last, as follows:—  
Resolved,—That in pursuance of the powers contained in the Deed of Settlement of the Clarendon Consolidated Mining Company of Jamaica (Limited), the company be wound-up and dissolved, without prejudice to the provisions contained in the deed, for continuing in force the provisions of the deed until the affairs of the company should have been fully wound-up.

And notice is hereby further given, that at such intended meeting a resolution will be proposed to continue the existing board of directors, as a board for the purpose of carrying out such winding-up and dissolution, and to fix a day from which such winding up and dissolution shall take effect.  
By order of the Board.

187, Gresham House, Old Broad-street, London, E.C., August 5, 1863.

**NOUVELLE MONTAGNE COMPANY.**—The shareholders are invited to assist at an EXTRAORDINARY GENERAL MEETING, to be HELD on the 14th SEPTEMBER NEXT, at the Hotel de Suete, at Liège, at One o'clock P.M., in order to proceed to the election of a director, and to decide upon the proposal to allow a percentage on the future profits to the director-general, who is now retiring.  
By order of the Directors, V. BOUHY, Le Directeur Général de la Société.

**WHEAL ELLEN (SOUTH AUSTRALIA) MINING COMPANY.**—Notice is hereby given, that a SPECIAL GENERAL MEETING of the Wheal Ellen (South Australia) Mining Company (Limited) will be HELD at the offices of the company, 31, Threadneedle-street, on FRIDAY, the 31st current, at Twelve noon, for the purpose of increasing the number of the directors to eight, by the election of three gentlemen, in accordance with the Articles of Association.  
London, August 12, 1863. By order of the Directors, J. BROWN, Esq.

**BLAENCENNANT SILVER-LEAD MINING COMPANY (LIMITED).**

Capital £25,000, in 25,000 shares, of £1 each.  
A deposit of 2s. 6d. per share to be paid on application, and 2s. 6d. on allotment.  
BANKERS—Metropolitan and Provincial Bank, Cornhill.  
BROKER—J. G. Bone, Esq., 3, Bank-chambers, Lothbury.

**OFFICES**—31, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C.  
Detailed prospectuses and reports may be obtained at the offices, and applications for shares may be made to the bankers, the broker, or the directors.  
If no allotment is made the deposit will be returned in full.

The lead mines of Cardiganshire sold in last quarter 1770 tons of ore, realising £23,750, and the dividends range up to 120 per cent.

## GREAT LAXEY MINING COMPANY (LIMITED).

**MR. RABY WILL SELL, BY AUCTION**, at his Sale Room, Drumgold-street, Douglas, Isle of Man, on Tuesday, the 18th day of August next, TWO HUNDRED SHARES in the above company, by order of the trustees of the will of the late John Cotton Tupper.  
For particulars and conditions, apply to A. W. ADAMS, of L. W. ADAMSON, advocates, Douglas, Isle of Man.

## ABERDOVEY.

**MR. HENRY JONES WILL SELL, BY AUCTION**, at the Corbet Arms Hotel, Aberdovey, on Thursday, the 26th of August inst., between the hours of Four and Six in the afternoon, by order of the mortgagee and trustee, and subject to the conditions to be then produced, in lots, viz:—

Lot 1.—All that VALUABLE MINERAL PROPERTY, known as the CORBET DOVEY MINE, situate at Aberdovey aforesaid, and containing several lodes of copper and silver-lead, with the MACHINERY thereon, comprising a 50 ft. water-wheel, 30 in. crushers, jiggers, washing machines, &c., the particulars of which will be specified at the time of sale.

The property has been recently at work, and is held for the residue of a term of 21 years, from the 24th day of June, 1862, at a rental of £50, or 1-12th royalty.

Lot 2.—Buckets, chains, barrows, shutes, blacksmiths, carpenters, and miners' tools, and other effects belonging to the mine, particulars of which will be specified at the time of sale.

For viewing the property, apply to the auctioneer, Aberdovey, and for further particulars to Mr. KIRKIN, solicitor, New Broad-street, City; or Mr. LUSCOMBE, 1, Verulam-buildings, Gray's Inn, London.

## THE BISHOPWEARMOUTH IRONWORKS, SUNDERLAND.

**MESSRS. FULLER AND HORSEY** are instructed by the Trustees of the Derwent and Consett Iron Company (Limited), and under the sanction of his Honour Vice-Chancellor Kindersley, to SELL, BY AUCTION, on Thursday, August 20th, 1863, at Two o'clock in the afternoon precisely, at the Queen's Hotel, Newcastle-upon-Tyne, in one lot (unless an acceptable offer be previously made by private contract).

THE BISHOPWEARMOUTH IRONWORKS, a HIGHLY IMPORTANT FREEHOLD AND COPYHOLD PROPERTY, at Sunderland, together with the costly MACHINERY, PLANT, and UTENSILS in trade.

The land occupied comprises a site of 12 A. 1 N. 2 P., or thereabouts, and has a frontage of about 300 yards next the Hyiton Road, immediately opposite the extensive glass works of Messrs. Hirst and Co.

The North-Eastern Railway (Fenshar branch) forms the western boundary, a siding on to which affords railway communication with the docks at Sunderland, and with all parts of the kingdom; the Lambton Colliery Railway to the River Wear intersects the property, and the Hetton Colliery Railway forms the eastern boundary. From each of the colliery lines rails have been laid on to the works, where extensive coal depots are formed, thus insuring a constant supply of coals direct from the pits on the best terms. The average price of coal does not exceed 5s. per ton. Labour is abundant and cheap, and scrap iron is brought as ballast by the numerous return colliers from the southern and other ports, at almost nominal freights.

The increasing local demand for iron must also not be overlooked, so that whether in obtaining the supply of raw material and labour, or for the facility of delivering the manufactured produce, few similar establishments possess so many advantages.

The works, as at present arranged, are capable of producing annually about 15,000 tons of rolled iron, 200 tons of large forgings, and 2500 tons of castings, but by the introduction of steam-hammers the production of large forgings (for which there is a great demand) may be materially increased.

The tenure of the land (principally) is freehold and copyhold (nearly equal to freehold), but some parcels of accommodation land are held by a yearly tenancy.

The new line of railway which will shortly be opened through the colliery pits to the Wear will be of great advantage to this property, as the present colliery line will then be abandoned (except for the supply of these works), and the site doubtless obtained, thus removing the intersecting line.

The outlay made in buildings and machinery has been very large, certainly not less than £70,000 or £80,000 having been expended, a considerable portion within the last 15 years, when the new works were erected.

These comprise rail, merchant, and puddling mills, fitted with three trains of rolls, shears, squeezers, hammer, and saws, with all the requisite gearing, driven by THREE HIGH PRESSURE STEAM ENGINES, the largest of which is of 120 horse power; NINE STEAM BOILERS, TWENTY-ONE PUDDLING FURNACES, and NINE MILL FURNACES, the whole under a lofty roof, covering 28,000 superficial feet, supported on iron columns; ONE DOUBLE and TWO SINGLE REFINERIES, with BLAST ENGINE and THREE STEAM BOILERS, TWO HAULING ENGINES, with BOILERS, winding drums and wire-rope; an open shed, with CORRUGATING MACHINE, PUNCHING MACHINE, and DRILLING MACHINE, worked by a HORIZONTAL STEAM ENGINE, sheet warehouse, smiths' shop, time office, and two bull-dog kilns.

The old works comprise the MILL, fitted with two trains of rolls for puddled bars and merchant bars, two pairs of shears and hammer with gearing; HIGH PRESSURE STEAM ENGINE, and THREE BOILERS; THREE FORGES, with hammer furnaces, cranes, and THREE STEAM ENGINES, with BOILERS; an engineers' fitting shop, with tools; brass foundry, with three pot furnaces; a spacious and lofty IRON FOUNDRY, with air furnace, two cupolas, cranes, roll mill, and blast fan, worked by a HIGH PRESSURE STEAM ENGINE and BOILER; three core stoves, a light pattern makers' shop, with pattern loft over; time-keeper's office, and draughtsmen's room; a deep well, affording an ample supply of excellent water, raised by two powerful pumps; a brick and cement reservoir, capable of containing 150,000 gallons; smiths' shops, capital stabling for sixteen horses, SEVEN BRICK COKE OVENS, and yard; manager's residence, offices for clerks and principals, iron warehouse, and various accessory erections; a 20 ton weighbridge, over which all wagons pass on entering.

The yards and works are intersected by railways laid down, connecting the various sections of the works with each other, and the whole with the lines of the North-Eastern and colliery railways; and water and gas laid into all parts of the buildings.

At the western extremity of the property is a large and convenient depot (formerly a stone quarry) for the waste from the works.

The works may be viewed till the sale by cards only, which, with printed particulars and plan of the property, may be obtained (post free on receipt of two stamps) of JOSEPH ANDERSON, Esq., solicitor, Newcastle-upon-Tyne; Messrs. R. P. and H. PHILLIPS, solicitors, Newcastle-upon-Tyne; JONATHAN FORSTER, Esq., solicitor, Newcastle-upon-Tyne; Messrs. HUTCHINSON and LUCAS, solicitors, Darlington; JAMES CHOWRY, Esq., solicitor, 17, Serjeant's Inn, Fleet-street, London, E.C.; Messrs. FIELD, ROSCOE, FIELD, and FRANCIS, solicitors, 36, Lincoln's Inn-fields, London, W.C.; Messrs. COLEMAN, TUGAND, YOUNG, and Co., accountants, 16, Tokenhouse-yard, London, E.C.; and of Messrs. FULLER and HORSEY, 13, Billiter-street, London, E.C.

Particulars may also be had at the *Midland Counties Herald* office, Birmingham; at the *Glasgow Herald* office, Glasgow; at the office of the *North British Advertiser*, Edinburgh; and at the Station Hotel, Carlisle.

## IMPORTANT TO IRON SHIPBUILDERS AND ENGINEERS.

**MR. BRANCH WILL SELL, BY AUCTION**, on Tuesday, the 26th inst., and several following days, at Eleven o'clock in the forenoon of each day, at the works of H. M. Lawrence and Co., Sandon Works, Sefton-street, Liverpool (unless previously disposed of by private treaty), ALL THE VALUABLE STOCK IN TRADE, and the whole of the EXTENSIVE and VALUABLE MACHINES, TOOLS, STEAM ENGINES, BOILERS, &c., forming the plant of the firm of H. M. Lawrence and Co., iron shipbuilders and engineers, and including a number of screw cutting and heavy self-acting slide lathes, boring mill, planing, drilling, slotting, and key grooving machines, all of the latest improvements, and gearing; circular saw benches with steam engines attached; punching and shearing machines, light and heavy rolls, three patent coke ovens, ironing blocks, stage piles, and a first-rate assortment of smiths' tools and portable forges.

The whole may be viewed on Saturday, 22d, and Monday, 24th inst., when catalogues (price 6d. each) may be had on the premises; and for them and further particulars, apply to Messrs. FLETCHER and HULL, solicitors, Cook-street; Mr. ALFRED S. SARGELL, solicitor, 16, North John-street; or Mr. BRANCH, auctioneer, Hanover-street, Liverpool. Mr. BRANCH will forward catalogues post on application enclosing 8 stamps.

## HEMATITE ORE—LEANTRESSANT, GLAMORGANSHIRE.

**SALE OF VAL**



WEST TOLCARENE MINE, NEAR CAMBORNE.  
VALUABLE MINE AND MATERIALS FOR SALE.

MR. JOHN MICHELL has been favoured with instructions to offer for sale, by public auction, on Tuesday, the 25th day of August, at eleven o'clock, on the mine, all that VALUABLE MINE, called WEST TOLCARENE, with the excellent MACHINERY and MATERIALS thereon, in one lot, consisting of—  
A 40 in. cylinder ENGINE, with one boiler, about 12 tons, nearly new; shears, balance-bob, with shaft tackle, 6 in. whip rope, 10 8 in. pumps, 10 piece and top do, 1 8 in. windrope, 1 8 in. pole, stuffing box and gland, 8 in. pole case, 2 cisterns, 2 10 in. working barrels, 2 10 in. 6 ft. do, 1 10 in. sinking windrope, 8 11 in. pumps, 1 11 in. flat bottom windrope, 25 fms. 1 1/2 in. bucket rods, bucket prongs and joints, pump rings, flange bolts, rod pins, rod plates, caps, berths, lifting jack, 25 fms. 1 1/2 in. wood rods, 2 1/2 in. kibbles, grinding stone, air machine, staples and glands, capstan chain, 40 fms., iron stove ladders, 34 fms., ladders, knocker line, crab winch, pick and shovel hilt, carpenter's bench, chest, 2 wood sheds, smith's bellows, anvil, vice, smith's tools, screw stocks and tools, new and old iron, steel, miners' tools, and a quantity of useful timber. Also, the whole of the account-house furniture.  
The machinery and materials may be inspected by applying to the agent, on the mine; and all further information obtained from FRANCIS PRYOR, Esq., Redruth; or Mr. JOHN MICHELL, Auctioneer, Littlebeade.—Dated Littlebeade, Scitour, August 12, 1863. (C)

## DERBYSHIRE.

TO MINE AND COLLIERY PROPRIETORS, ENGINEERS, AND OTHERS.

MR. DENHAM WILL SELL, BY AUCTION, ON Wednesday, the 25th day of September, 1863, the whole of the VALUABLE and EXTENSIVE MINING PLANT at the NORTH DERBYSHIRE and WHEN PARK MINES, CALVER, near BAKEWELL, comprising in part a first-class 70 in. cylinder CORNISH PUMP ENGINE (nearly new), 200 horse power, with THREE LARGE CORNISH BOILERS. Also, a 35 horse HIGH PRESSURE HORIZONTAL ENGINE, with drawing and pumping apparatus, TWO BOILERS, and two large quadrant levers. About 150 tons of pumps, varying in size from 12 to 24 in. diameter; pump rods, straps, bolts, &c.; powerful capstan, rope, and shear legs, 60 ft. high; ropes, chains, pit rails, contents of joiners and blacksmiths' shops, screw jacks, lifting screws, quantity of valuable timber, engine-houses, sheds, stoves, gas, handstocks and pulleys, crab blocks and ropes, and other miscellaneous lots admirably adapted for mining purposes, the whole of which will be particularized in catalogues, which may be had on application to Mr. FAIRBURN, Hartshill, Sheffield; or Mr. WEAVER, engineer, Chesterfield; and of the auctioneer, seven days prior to the sale.  
The mines are within two miles of the Hasop station, on the Ambergate and Manchester Railway.—Chesterfield, August 5, 1863.

## COUNTY OF LANK.

UPSET PRICE REDUCED TO £20,000.

THE DUNDYVAN IRONWORKS AND OTHER PROPERTIES, SITUATED NEAR COATHRIDGE, FOR SALE.—There will be exposed to sale, within the Faculty Hall, Glasgow, on Wednesday, the 26th Aug. 1863, at Two o'clock afternoon (unless previously disposed of by private bargain), the DUNDYVAN FIG and BAR IRONWORKS, comprising—

- 1.—THE FIG IRONWORKS, consisting of EIGHT BLAST FURNACES, with all the usual working conveniences, counting-house, warehouse, stables, &c.
- 2.—THE BAR IRONWORKS, consisting of FORTY-FOUR PUDDLING FURNACES, with all the usual working conveniences, capable of turning out 350 tons of finished iron weekly, consisting of plates, rails, and bars in great variety.
- 3.—ONE HUNDRED AND FIFTY-FOUR WORKMEN'S DWELLINGS, known by the names of "Long Row," "English Square," and "Stone Row."
- 4.—THE LANDS OF DYKE, with the FARM BUILDINGS, STEAM ENGINE, THRESHING MILL, RAILWAY, &c., &c.

The above subjects extend to above 35 acres imperial, and the minerals therein will be included, in so far as belonging to the exposer, with the machinery, fittings, and fixed plant at Dundervan Pit.  
5.—THE MINERALS HELD IN LEASE, consisting of DRUMPELLER, SOUTHERN, HOUSE, and DALZIEL COAL, and WHIFFLAT and HOUEHILL IRONSTONE, with the whole MACHINERY, FITTINGS, RAILWAYS, and FIXED PLANT, of every kind attached thereto.  
The purchaser will also be entitled to a lease, on favourable terms, of the valuable ironstone in the estate of Arden, extending to 1100 acres or thereby, and to the option of taking at a valuation the movable stock and utensils connected with the mines and ironworks; and also the farm leases of Whifflat and Souterhouse farms, including implements and utensils. All as per inventories.  
For further particulars apply to Messrs. ATKIN and MACKENZIE, accountants, Glasgow; Messrs. MACKENZIE and MOORE, mining engineers there; Messrs. MELVILLE and LINDSAY, W.S., Edinburgh; Messrs. MONCRIEFF, PATTERSON, FORBES, and BAIRN, writers, Glasgow; or Messrs. BANNATTIN and KIRKWOOD, writers, there; the last of whom will exhibit the titles and articles of roup.

MESSRS. W. DERRY AND CO., MINING MATERIAL MERCHANTS, ST. AUGUSTINE, respectfully inform the mining public that they have constantly ON SALE EVERY DESCRIPTION OF MINING PLANT, IN STEAM ENGINES, PITWORK, and dressing appliances, which they are prepared to offer on very advantageous terms, and such as will especially commend themselves to the projectors of new undertakings.—Applications to be addressed as above, or to the engineer of the company, Mr. W. H. GRAY, St. Austell.  
Dated St. Austell, August 12, 1863.

WILLIAM MATHEWS, ENGINEER, TAVISTOCK, FOR SALE.—ONE 30 in. CORNISH PUMP ENGINE, with BOILER 2 tons; ONE 10 in. HORIZONTAL WHIM ENGINE, in cage, with BOILER 4 1/2 tons; TWO 10 horse PORTABLE ENGINES, for winding or pumping; ONE CORNISH CRUSHER; ONE 30 ft. diameter WATER WHEEL, 9 ft. broad; iron axle, sockets and rings; 60 fms. of 2 in. flat-rods, with pulleys.

VALUABLE FREEHOLD ESTATE IN SWEDEN.—A client of Mr. T. F. Chorley possesses a valuable freehold estate in Sweden, on the Baltic, containing a vast quantity of mineral and metallic wealth, besides marble, slate, lime, brick earth, &c., and is DESIROUS OF FORMING A COMPANY, under the Limited Liability Act, to work the same, with a capital of about £50,000. For this purpose proposals are invited for promoting the scheme referred to, and a liberal bonus will be given on a company being formed. The proprietor will be prepared to take a considerable sum in shares.—Specimens of the ores, &c., may be seen at Mr. CHORLEY'S office, 48A, Moorgate-street.

COPPER MINE LEASES AND PLANT FOR SALE.—TO BE SOLD, BY PRIVATE BARGAIN, the LEASES and PLANT of the CALDER GLEN UNITED MINES (LIMITED), situated at LOCHWINNOCH, SCOTLAND. The very favourable opinions expressed by several respectable mining engineers as to the prospects of the mine have been fully confirmed during the short period operations have been carried on, and the mine developed; and a parcel of ore has been sent to market and sold with encouraging results. The plant is of the most substantial description.—Further particulars will be communicated on application to WILLIAM CONNELL, solicitor, Lochwinnoch, with whom offers will require to be lodged betwixt and the 25th inst.—Lochwinnoch, August 6, 1863.

A VALUABLE TIN LODE TO BE DISPOSED OF, upon reasonable terms. The lode is into a hill on the junction of the Killas and granite, and can be worked to a great advantage by erecting a stamps, which can be worked by water-power. Tin can be returned soon after the stamps are erected, and the lode be worked at a profit. The lode has been proved 5 fms. below the surface, and is now visible. In the same lode there is a bed of china clay, of a good quality; it can be worked at a great profit, as water is close by, and the best near a railway; further particulars can be obtained by addressing "K. C.," Mining Journal office, 36, Fleet-street, London, E.C.—Dated August 6, 1863.

A SLATE AND SLAB QUARRY TO BE DISPOSED OF.—A leasehold for 99 years. Royalty, 1-15th; with every convenience to open extensive quarries. There is also a railway conveyance in progress through the estate, a few hundred yards from the present quarry.—Particulars will be given on application to Mr. W. T. OWAN, Llandrillid, near Corwen, North Wales.

FOR SALE, BY PRIVATE CONTRACT, the CWM BACH COLLIERY, situated about two miles from the town of Swansea, in the county of Glamorgan, and within 70 yards of the South Wales Railway, having the six-foot and three-foot seams of HIGH BITUMINOUS COAL, now open and in good working order, with engine, boiler, pumping and winding gear, complete, now working on both seams, and open for inspection on application to the proprietor, or to the manager on the works. For further particulars apply to the proprietor, Mr. DANIEL JONES, No. 45, Strand, Swansea.

FOR SALE, THREE BOILERS, 41 ft. by 6 ft.; 19 in. FORCING PUMP, 14 in. LIFTING PUMP, HAND PUMPS, T. bob, pumping crank, lifting screw, pit chain, and other colliery material.—Apply to Mr. JOHN PARKES, Nailsea, near Bristol.

FOR SALE, CHEAP, FOUR 12 ton BROAD GAUGE COAL TRUCKS. Have been at work two years. Also, four 10 ton ditto, in good condition.—Apply to R. COOK, Salisbury.

ON SALE, ALUMINIUM, and ALL ITS ALLOYS.—Apply to Mr. HALL, Assayer, Metallurgist, and Mining Agent, Whitehaven.

ON SALE, IRON and LEAD ORES of ANY QUALITY, or in ANY QUANTITY.—Apply to Mr. HALL, Assayer, Metallurgist, and Mining Agent, Whitehaven.

PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its core, which, being patent right, is fully distinguished from all imitations, and ensures the continuity of the gunpowder. This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be of any length and size, and adapted to every climate.  
Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckermill, Cornwall.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON and CO., PENHALLECK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.  
For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS, or SUPPLYING FUSE upon warrant that it will prove equal to, if not better than any to be procured elsewhere.

ASSAYS AND ANALYSES OF EVERY DESCRIPTION.—Conducted by JOHN MITCHELL, F.C.S., M.G.A. (late Mitchell and Rickard) Author of "Manual of Practical Assaying," "Metallurgical Papers," &c. All communications and samples to be addressed (free) to Mr. MITCHELL, care of Mr. F. CLAY, 29, Great St. Helen's, London, E.C.

NICHOLLS, WILLIAMS, AND CO., ENGINEERS,  
REDFORD IRONWORKS, TAVISTOCK.

MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg most especially to call the attention of the public to the manufacture of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS OF ANY SIZE. CHAINS made of the best iron, and warranted. RAILWAY WORK OF EVERY DESCRIPTION.

## FISHER BROTHERS AND CO.

FIRE BRICK MANUFACTURERS, STOURBRIDGE.  
BLAST FURNACE BRICKS of the MOST DURABLE QUALITY SUPPLIED to ANY SPECIFICATION.

SHORTBRIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING the STRENGTH of STEEL with the MALLEABILITY of COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTBRIDGE, HOWELL, and Co., Hartford Steel Works, Sheffield; or Messrs. HARVEY and Co., 12, Haymarket, London.

## RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO.,

MIDLAND WORKS, BIRMINGHAM.  
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.  
IN STOCK—FOR SALE OR HIRE.

RAILWAY STONE AND COAL WAGONS TO BE LET.—Apply to Messrs. W. L. and T. UNDERHILL, Tipton.

## RAILWAY CARRIAGE COMPANY (LIMITED).

ESTABLISHED 1847.  
OLDBURY WORKS, NEAR BIRMINGHAM.  
MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.  
Passenger carriages and wagons built, either for cash or for payment over a period of years.

RAILWAY WAGONS FOR HIRE.  
CHIEF OFFICES.—OLDBURY WORKS, NEAR BIRMINGHAM.  
LONDON OFFICES.—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

## THE BIRMINGHAM WAGON COMPANY (LIMITED)

IS PREPARED TO SUPPLY RAILWAY WAGONS OF EVERY DESCRIPTION, capable of carrying 6, 8, or 10 tons, at annual rentals, or for purchase on deferred payments, on advantageous terms.  
EDMUND FOWLER, Esq.,  
OFFICES.—3, NEWHALL STREET, BIRMINGHAM.

## THE PATENT FILE COMPANY (LIMITED).

Capital £100,000, in 10,000 shares of £10 each.  
Deposit on application, 10s. per share. Payment on allotment, 10s. per share.  
Calls of £1 per share, at intervals of not less than two months.  
Detailed prospectuses, and forms of application for shares, may be obtained at the offices of the company, 27, Moorgate-street, London, and 29, Waterloo-street, Birmingham.  
CHAIRMAN.—HENRY HOWELL, 29, Waterloo-street, Birmingham.  
SECRETARY.—HENRY HOWELL, 29, Waterloo-street, Birmingham.  
LONDON SECRETARY (pro tem).—John Seward Rutter, 27, Moorgate-street, London.

## THE PATENT FILE COMPANY (LIMITED).

The provisional committee, being anxious to avoid unnecessary preliminary expenses, respectfully request intending applicants for shares to make immediate application, through the secretaries, 29, Waterloo-street, Birmingham, and 27, Moorgate-street, London, or the following brokers, viz.:—The Members of the Birmingham Stock Exchange; Mr. SAMUEL FAIRBURN, Manchester; Mr. HUGHES WITHERS, Liverpool; Messrs. JOHN WATSON and SON, Sheffield; Mr. JOSEPH DREWRY, Newcastle-on-Tyne; Mr. W. H. GREEN, Gloucester; Mr. G. S. BRYANT, Bristol; Messrs. WATSON and SMITH, Glasgow; Messrs. JAMES CARTER and SON, Nottingham; Messrs. WILKINSON and INGLEY, Hull; Mr. ROBERT MOWATT, 14, George-street, Edinburgh; Mr. CHARLES STEVENSON, Derby; Mr. JOHN BARBER, Wellington; Mr. THOMAS CLARKE, Hertford-street, Coventry.  
HENRY HOWELL, Secy.

## HOCHDAHL FIG-IRON, AND HOCHDAHL "SPIEGEL-EISEN."

Hochdahl, near Düsseldorf (Rhenish Prussia), July 11, 1863.  
We beg to announce that we have this day appointed Messrs. ROBINOWS and MARJORIBANKS, in GLASGOW, to be our SOLE AGENTS for the SALE, IN GREAT BRITAIN, of our HOCHDAHL FIG-IRON, and HOCHDAHL "SPIEGEL-EISEN," and we would invite orders through the medium of the said firm.  
THE HOCHDAHL MINING COMPANY.  
W. JOSEF, J. SCHMIDELBACH.

GLASGOW, JULY 14, 1863.—With reference to the annexed announcement, we beg to direct attention to the Fig-iron and "Spiegel-Eisen" of the Hochdahl Mining Company, in Rhenish Prussia. These kinds of iron are produced from the spathic and brown hematite iron ores, from the best mines in the Siegen and Nassau districts. There are several mines in these districts, the products of which are of exquisite purity; and, if they have not yet become better known and appreciated, it is solely attributable to the absence of railway communication hitherto.

The Hochdahl Mining Company has secured the working of the above mines for a long series of years; this, and the very excellent system adopted in their works, enable them to supply uniformly the same good qualities.

A careful analysis of the different kinds of iron has yielded the following results:—

	Hochdahl "Spiegel-Eisen" A	Hochdahl Fig-iron A	Hochdahl "Spiegel-Eisen" C	Hochdahl Fig-iron C
Best Best.				
Made with coke.	Made with coke.	Made with coke.	Made with coke.	Made with coke.
Iron .....	89.96	89.96	90.01	90.70
Manganese .....	0.07	0.07	0.06	0.06
Carbon .....	0.04	0.04	0.04	0.07
Silica .....	0.01	0.01	0.01	0.01
Aluminium .....	0.06	0.04	0.03	0.04
Sulphur .....	0.03	0.03	0.03	0.03
Copper .....	0.04	0.04	0.04	0.04

These results show that the great excellence and purity of the kinds of iron, which are demonstrated by practical experience, as proved by the reputation which the Hochdahl Ironworks enjoy, both in Germany and in France. At present they produce already, with three furnaces, 700 tons weekly, but they continue still further to extend. The very small presence of silica is one of the characteristics of the Hochdahl iron—all other kinds of iron (not excepting even those made with charcoal) containing at least twice as much. The great advantage of the absence of silica is that the iron does not injure the puddling furnaces, and is therefore used in preference by the puddling works.

In order well and satisfactorily to work the iron, and especially the "Spiegel-Eisen," it is required that the puddling furnace should have a strong draught and great heat, so that the iron may be continued to be worked, after being melted, with the register closed.

The Hochdahl "Spiegel-Eisen" is well adapted for the Bessemer process; and its great suitability for puddled and cast-steel is beyond doubt. "Spiegel-Eisen A" is chiefly used for the manufacture of cast-steel articles. "Spiegel-Eisen C" and "Fig-iron C" are much used in Germany for puddle steel articles. "Fig-iron C" is besides used in preference for the manufacture of the best qualities of sheets, bars, angle and T iron, and for wire drawing.

"Spiegel-Eisen A" is even more suitable for puddle steel, because it melts faster in the furnace than "Spiegel-Eisen A" and gives a better result than "Spiegel-Eisen C." The present prices are:—  
"Spiegel-Eisen A" .....

"Fig-iron A" .....

"Spiegel-Eisen C" .....

"Fig-iron C" .....

Or 2s. 6d. per ton additional if delivered ex ship at Liverpool, Bristol, or Grangemouth.  
ROBINOWS AND MARJORIBANKS.

## DINAS FIRE-BRICKS.—MESSRS. FREDERICKS AND JENNER

beg to offer these well-known bricks, either at their Dinas Bridge or Kidwelly Works, and can safely recommend them as EQUAL, if not SUPERIOR, to ANY FIRE-BRICK MANUFACTURED, having the highest testimonials from the largest copper smelters and consumers in the world.—Full particulars, with testimonials, prices, &c., can be had on application to their agent, Mr. GEORGE YOUNG, Briton Ferry, South Wales; the Dinas Bridge Brick Works, Glyn Neath; Kidwelly Brick Works, Kidwelly; or Messrs. EASTWOOD, Belvidere-road, London.

ASSAYS AND ANALYSES OF ORES, METALS, MANURES, &c., on the most moderate terms, and with the utmost accuracy. List of fees per post, on application.  
JOHN LONGMAYN, CITY LABORATORY AND ASSAY OFFICE, 81, THROGMOUTH STREET, E.C.

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon. MINES INSPECTED and FAITHFULLY REPORTED ON. DEALER IN MINING, RAILWAY, and OTHER SHARES.

His monthly "Circular" for July contains important information on legitimate mining; also a selected list of dividend and progressive mines. Forwarded on receipt of 4s. postage stamps.—6, Finsbury-street, Finsbury-square, London.

MR. GEORGE HENWOOD, MINING ENGINEER, LOCHHEAD HOUSE, LOCHWINNOCH, SCOTLAND, OFFERS his SERVICES and ADVICE on mines situated in any part of England, Scotland, Wales, Ireland, Isle of Man, &c. Mr. Henwood's extensive experience in his peculiar department of mining science is well known, and will be exerted to the utmost for the benefit of his clients.

BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES.  
MESSRS. T. FULLER and CO., 26, CHANGE ALLEY, CORNHILL, LONDON, TRANSACT BUSINESS IN EVERY DESCRIPTION OF SHARES IN BANKS, RAILWAYS, CANALS, INSURANCE, MINES, and GOVERNMENT STOCK. Dividends received, calls paid, and every class of Stock Exchange business effected.

## Tavistock Ironworks, Devon.—(Established 1804.)

GILL AND CO., ENGINEERS AND IRONFOUNDERS, MANUFACTURERS OF STEAM ENGINES and BOILERS. CHAINS of ALL DIMENSIONS. STEELED SHOVELS to any pattern. EVERY DESCRIPTION of CAST and HAMMERED IRON for MINING, MANUFACTURING, and AGRICULTURAL PURPOSES.

HAMMER MILLS. EDGE TOOL MANUFACTORY. FOREIGN MINES SUPPLIED ON LIBERAL TERMS. VARIOUS DESCRIPTIONS of SECOND-HAND MACHINERY CONSTANTLY ON HAND.  
N.B.—AGENTS for TANGY'S PATENT HYDRAULIC LIFTING JACK, and WESTON'S PATENT DIFFERENTIAL PULLEY BLOCKS.

## International Exhibition, 1862.

CLASS IX.—PRIZE MEDAL for AGRICULTURAL PORTABLE STEAM ENGINES and MACHINERY.  
CLASS VIII.—PRIZE MEDAL for HORIZONTAL HIGH PRESSURE STEAM ENGINES.  
For "Good arrangement, good workmanship, and practical success."

CLAYTON, SHUTTLEWORTH, AND CO., ENGINEERS, MANUFACTURERS OF PORTABLE and FIXED STEAM ENGINES, MACHINERY for PUMPING, HOISTING, GRINDING, SAWING, and AGRICULTURAL PURPOSES, &c., adapted for any part of the world.

STAMP END WORKS, LINCOLN; and 78, LOMBARD STREET, LONDON.  
Descriptive, illustrated, and priced catalogues free per post.

Prize Medal Awarded Great Exhibition, 1851, for Mining Chains.

EDGE AND SON, MANUFACTURERS OF IMPROVED FLAT and ROUND CHAINS and WIRE ROPES, for MINING PURPOSES.

BOULDER, KIBBLES, BOILERS, IRON BLOCKS, and BLOCK CHAINS, RAILWAY COUPLINGS, HORSE TRACES, CRANE CHAINS, and SHIP'S CABLES.  
MANUFACTORY, COALPORT, SHROPSHIRE.

Prize Medal, International Exhibition, 1862.

AVELING AND PORTER'S PATENT TRACTION ENGINES and LOCOMOTIVES FOR MINERAL RAILWAYS.  
For prices, illustrated description, and testimonials, apply to AVELING and PORTER, engineers, Rochester, Kent.

ELLIS LEVER, INVENTOR and MANUFACTURER of the IMPROVED SAFETY BRATTICE and FLEXIBLE TUBING, 23, MARSDEN SQUARE, MANCHESTER.

MANUFACTORY, WEST GORTON WORKS, MANCHESTER.

EDWARDS'S PATENT MINERAL ORE and COAL WASHING MACHINE.—This is by far the MOST ECONOMICAL, as well as the MOST PERFECT MACHINE MADE. Each machine is capable of washing 25 to 50 tons per diem, according to quality.—Full particulars, testimonials, &c., may be obtained from E. EDWARDS, Esq., C.E., 1, York-buildings, Adelphi, where a working model may be seen.

Adopted by the Governments of Great Britain, Spain, Denmark, Russia, Brazil, East and West India.

EASTON'S PATENT BOILER FLUID, FOR REMOVING AND PREVENTING INCORUSTATION IN STEAM BOILERS, LAND and MARINE.

P. S. EASTON and G. SPRINGFIELD, Patentees and Sole Manufacturers, 37, 38, and 39, WAPPING WALL, LONDON, E., Or of their Agents in the principal towns of Great Britain and the Colonies.

The Railway System of the World.

TESTIMONIAL to WILLIAM HENRY JAMES, C.E., In recognition of his unrequited public services in connection with the founding of our magnificent railway system, by the gratuitous assistance he rendered his late father, William James, Esq., of Warwick, land agent, ironmaster, and civil engineer, in surveying, levelling, and planning the Liverpool and Manchester Railway, with its branches to Bolton, &c., in the years 1821, 1822, and 1823, the first established for engine passenger transit; and for his having allowed the late George Stephenson and his partner, Mr. Losh, of Newcastle-upon-Tyne, the liberty of using his invention of the introduction of Tubes into the boilers of their locomotive engines, as shown by an agreement, dated Sept. 1, 1821, which introduction of Tubes, as first suggested by Mr. William Henry James, and since adopted, modified, and perfected by the engineering profession, is well known to every engineer to have caused the entire success of the modern railway system; and, lastly, to compensate him in some slight degree for the loss of his patrimony of £50,000, as settled by will, as well as private property of great value, by the ruin of his father, in 1823, while so engaged, and while so assisting him in laying the foundation of the great railway system of the world, which has already conferred such innumerable benefits upon mankind.

As a guarantee, the following eminent engineers and gentlemen have already attached their names in furtherance of this testimonial, to which it is expected many others will soon be added, viz.:—  
GEORGE RENNIE, Sir CHARLES FOX.  
Sir JOHN MACNEILL, WM. SCHOLFIELD, M.P.  
THOMAS PARKES, JOHN PARKES.  
JOHN BARBER, WM. MARSDEN, M.D.

PERSONAL REFERENCE.  
MR. RICHARD MIDDLETON, Mining Journal, 26, Fleet-street.  
MR. RICHARD A. BROOMAN, Mechanics' Magazine office, 166, Fleet-street.

It is respectfully requested that all contributions may be made to Messrs. COOTE and Co., bankers, London, who have kindly consented to receive such subscriptions; and any sum offered will be carried to the credit of "Subscriptions for W. H. James, C.E.," and will be held at his disposal.

A complete list of subscribers, together with the amount of their donations, will be published as soon as they shall reach an adequate amount.

IMPROVED APPLICATION OF WATER-POWER.

THE TURBINE.—MACADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, have been engaged for 12 years, with complete success, in MANUFACTURING their IMPROVED TURBINES, and can recommend them with confidence.

This machine is applicable to all practicable heights of fall and quantities of water, giving a much higher percentage of power than any other description of water-wheels. On low falls it has the additional advantage of not being affected by floods or back-water, and it is particularly well adapted for any falls where the quantity of water is variable.

Further particulars on application; also, references to turbines now at work on a great variety of falls.

HALL AND WELLS, PATENTEES AND MANUFACTURERS OF SUBMARINE TELEGRAPH CABLES, CABLES, &c.—TELEGRAPH CONDUCTORS INSULATED WITH INDIA RUBBER at 45 per mile and upwards, PARTICULARLY ADAPTED FOR MINING PURPOSES. Further particulars as to price of cables, &c., can be had on application at 60, Aldermanbury, City, E.C.; and Steam Mills, Mansfield-street, Borough-road, Southwark, S.E. Copper wire covered with silk, cotton, or any other material, to order.

CORNISH CRUCIBLE and BLACK-LEAD POT MAKER. JOHN JULEFF, FORE STREET, and PEDN-AN-DREA, REDRUTH.

NICKEL and COBALT REFINING, and GERMAN SILVER WORKS, 16, OZZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL. OXIDE OF COBALT. (WIRE, &c.) REFINED METALLIC BISMUTH. GERMAN SILVER.—INGOTS, SHEET NICKEL and COBALT ORES PURCHASED.

GOLDENHILL, COBALT, NICKEL, COLOUR, BORAX, AND CHEMICAL WORKS, NEAR STOKE-UPON-TRENT, STAFFORDSHIRE.

JOHN HENSHALL WILLIAMSON, MANUFACTURER and REFINER. Reference.—Professor Miller, King's College, London.

CHARLES DAVEY AND CO. SAFETY FUSE MANUFACTURERS, ST. HELEN'S JUNCTION, LANSHIRE.

ACCIDENTS BY ROAD, RIVER, OR RAILWAY, ACCIDENTS IN THE FIELD, THE STREETS, OR AT HOME.

May be provided against by taking a Policy of the RAILWAY PASSENGERS' ASSURANCE COMPANY, 64, CORNHILL, LONDON.

£140,000 has been already paid as compensation for accidents of all kinds, in 75 fatal cases, and 6880 cases of personal injury. Rates and further particulars may be obtained at the railway stations, of the local agents, or at the HEAD OFFICE, 64, CORNHILL, LONDON, E.C. Railway Passengers' Assurance Company, WILLIAM J. VIAN, Sec. Empowered by special Act of Parliament, 1849.

RATS! RATS! RATS!!!

IMPORTANT and VALUABLE DISCOVERY.—HARVEY'S METHOD EXTERMINATES all the RATS on the premises in ONE WEEK, without the use of poisons, traps, dogs, or ferrets, and leaves NO DEAD RATS IN THE HOLES. Simple in its operation, trifling in its expense, CERTAIN in its SUCCESS, permanent in its result.

It has proved an IMMENSE BOON to hundreds of FARMERS, is INVALUABLE to ALL PERSONS whose lands or premises are infested with these obnoxious and destructive vermin, and is universally acknowledged to be the GREATEST SUCCESS OF THE DAY. Sent post free by the inventor, on receipt of thirty stamps.—Address, WILLIAM H. HARVEY, Wellington-road, Great Yarmouth.

DR. SMITH has just published a free edition of his valuable work, the PRIVATE MEDICAL FRIEND (116 pages), on the Self Cure of Nervous Debility, Loss of Memory, Dimness of Sight, Lassitude, &c., resulting from the excess of THE DAY. Sent post free in any address, on receipt of a directed envelope, enclosing two postage stamps.—Address, Dr. SMITH, 6, Burton-cremont, Tavistock-square, London W.C.



## THE MINING SHARE LIST

## DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
1000	Aldridge Edge (Cumbria) [L.]	10 0 0	—	—	—
4000	Bedford United (copper), Tavistock	2 5 0	—	—	—
1248	Boscawen (tin), St. Austell	2 15 0	—	—	—
340	Boscawen (tin), St. Austell	20 0 0	—	—	—
700	Boscawen (tin), St. Austell	21 5 0	—	—	—
8000	Boscawen (tin), St. Austell	2 7 6	—	—	—
916	Cargill (silver-lead), Newlyn	15 5 0	44	—	—
1000	Carn Brea (copper), Illogan	15 0 0	—	—	—
3000	Chiverton (lead), Perranabuloe	—	—	—	—
1900	Clifford Amalgamated (cop.), Gwennap	30 0 0	32	30 31	—
1024	Copper Hill (copper), Redruth	12 0 0	—	20 21	—
12000	Copper Mines of England	28 0 0	—	—	—
4000	Ditto	100 0 0	—	—	—
1055	Graddock Moor (copper), St. Austell	8 0 0	—	—	—
115	Graddock Moor (copper), St. Austell	—	—	—	—
887	Cwm Ertin (lead), Cardiganshire [L.]	7 10 0	14	—	—
128	Cwmystwith (lead), Cardiganshire	60 0 0	—	—	—
280	Dewent Mines (sil.-lead), Durham	300 0 0	—	—	—
1024	Devon Gt. Con. (cop.), Tavist. [S.E.]	1 0 0	570	—	—
358	Dolcoath (copper), Camborne	128 17 0	—	—	—
12800	Drake Walls (tin, copper), Calstock	3 10 0	134	—	—
4000	Drygwyn (lead), Wales	12 6 0	—	—	—
512	East Bassett (cop.), Redruth [S.E.]	29 10 0	824	79 81	—
6144	East Carradon (copper), St. Austell [S.E.]	2 15 0	29	29 29 1/2	—
300	East Carradon (copper), St. Austell	32 0 0	—	—	—
128	East Pool (tin, copper), Pool, Illogan	24 5 0	—	—	—
2800	Foxdale (lead) Isle of Man [L.]	25 0 0	—	—	—
8000	Frank Mills (lead), Devon	3 18 6	—	—	—
1788	Great Wheal Fortune (tin), Breage	18 6 0	35	29 30	—
4908	Great Wh. Vor (tin, cop.), Helston [S.E.]	4 0 0	—	64 74	—
10240	Gunnis Lake (Clitters' Adit)	0 2 0	—	—	—
1024	Harodfoot (id.), near Liskeard [S.E.]	8 10 0	40	37 1/2 38 1/2	—
4000	Hibernian Mine Company	32 0 0	—	—	—
4000	Lisborne (lead), Cardiganshire, Wales	18 0 0	—	—	—
9000	Martha (copper), Cardiganshire	4 10 0	—	—	—
1800	Miners Mining Co. (L.) (id.), Wrexham	25 0 0	—	—	—
20000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	—	19	—
640	Mount Pleasant (lead), Mold	4 0 0	—	—	—
40000	Mynydd (iron ore) [L.] [S.E.]	2 10 0	—	—	—
280	Nanty Mines (lead), Montgomery	20 0 0	—	—	—
5828	North Trekerby (copper), St. Agnes	1 0 0	34 1/2 34 1/2	—	—
8000	Ormside (lead), Flintshire	0 8 0	—	—	—
640	Par Consols (cop.), St. Blaize [S.E.]	1 2 6	—	—	—
200	Parys Mines (copper), Anglesey [L.]	50 0 0	—	—	—
1172	Pulbrier (tin), St. Agnes	8 0 0	—	—	—
112	Pybrier (tin), St. Agnes	0 7 0	42	41 42	—
6000	Rosewall Hill and Ransom United	2 16 0	—	—	—
16	Rosemarion (lead)	50 0 0	—	—	—
512	South Carradon (cop.), St. Austell [S.E.]	1 5 0	420	—	—
512	South Tolgus (cop.), Redruth, Cornwall	8 0 0	—	42 1/2 45	—
8000	South Exmouth (lead), Christow	1 0 0	—	—	—
498	S. Wh. Frances (cop.), Illogan [S.E.]	18 18 0	—	70 74 1/2	—
1024	South Woodley	0 5 6	—	—	—
280	Spearhead Moor (tin, copper), St. Austell	31 17 0	—	—	—
240	St. Ives Consols (copper), Cornwall	2 0 0	—	27 28	—
8000	Tincroft (cop., tin, Pool, Illogan)	9 0 0	22 1/2	21 22	—
1000	Trumpet Consols (tin), near Helston	11 10 0	—	—	—
4200	Vigra and Clogau (tin) [L.]	2 15 0	—	—	—
8000	West Bassett (copper), Illogan [S.E.]	1 10 0	19	—	—
1024	West Carradon (cop.), Liskeard [S.E.]	5 0 0	24	21 22	—
3000	West Chiverton (lead), Perranabuloe	—	28	28 29	—
286	West Damsel (copper), Gwennap	38 10 0	—	—	—
6100	West Fowey Consols (tin and copper)	7 10 0	—	—	—
1024	West Penruthral	4 0 0	—	—	—
400	W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0	—	235 245	—
512	Wheal Bassett (copper), Illogan [S.E.]	7 0 0	60	60 65	—
1000	Wheal Bassett and Grylls (tin)	7 0 0	24	—	—
1024	Wheal Grylls (tin), Perranabuloe	2 4 0	—	—	—
4000	Wh. Ludcott and Wrey (lead), St. Ives	2 18 0	34 1/2 3 34 1/2	—	—
896	Wh. Margaret (tin), Uny Lel. [S.E.]	9 17 6	33	—	—
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	13	—	—
80	Wheal Owles (tin), St. Austell, Cornwall	70 0 0	—	—	—
896	Wheal Seton (tin, copper), Camborne	58 10 0	227 1/2 220 222 1/2	—	—
1040	Wh. Trelawny (sil.-id.), Liskeard [S.E.]	5 17 0	17	17 17 1/2	—
8000	Wicklow (copper) [L.]	8 0 0	—	—	—

[\* Dividends paid every two months. † Dividends paid every three months.]

## MINES WITH DIVIDENDS IN ABEYANCE.

300	Cefn Cwm Brynno (lead), Cardiganshire	35 0 0	—	—	—
350	Condurrow (cop., tin), Camborne	35 0 0	—	95 100	—
2450	Cook's Kitchen (copper), Illogan	17 15 0	26 1/2	25 26	—
4076	Devon and Cornwall (copper)	5 16 3	—	—	—
672	Ding Dong (tin), Guisval	40 18 6	—	—	—
840	Fowey Consols (copper), Twardreath	4 0 0	—	—	—
6000	Great South Consols (S.E.)	0 14 6	—	—	—
8000	Kelly Bray (lead, copper), Callington	4 15 6	—	—	—
160	Levant (copper), St. Austell	2 10 0	—	—	—
6000	New Birch Tor and Vitrifer Cons. (tin)	1 6 0	—	—	—
470	Newtownards Mining Co., Co. Down	5 0 0	—	—	—
400	Phonix (copper and tin)	—	—	—	—
4026	Rosewarne Consols (copper)	3 19 0	—	—	—
8000	Tamar Con. (sil.-id.), Beeralton [S.E.]	4 10 0	—	—	—
572	Trevelyan Consols (tin), St. Ives	13 10 0	—	—	—
1024	Wendron Consols (tin), Wendron	13 10 0	10	9 10	—
60	West Hill (lead), St. Austell	8 0 0	—	—	—
256	Wheal Buller (cop.), Redruth [S.E.]	5 0 0	—	—	—
128	Wheal Friendship (copper), Devon	40 0 0	—	—	—
1024	Wheal Hearle (tin), St. Austell	10 18 0	—	—	—
512	Wheal Jane (silver-lead), Kea	3 10 0	—	—	—
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	2 0 6	11 1/2	9 10	—
6995	Wheal Kitty (tin), St. Agnes	5 4 6	8 1/2	8 1/2	—

## FOREIGN MINES.

2484	Burra Burra (cop.), South Australia	5 0 0	—	—	—
4000	Central American (silver) [L.]	5 0 0	—	—	—
13000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	31	29 31	—
10000	Copiapu Mining Company, Chile [S.E.]	16 0 0	—	—	—
18000	East Indian Coal, Calcutta [L.]	10 0 0	—	—	—
70000	English and Australian [S.E.]	5 0 0	—	—	—
25000	Fortuna (lead), Spain [L.]	2 0 0	—	—	—
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	320 0 0	—	—	—
80000	Kapunda Mining Co., Australia [S.E.]	1 0 0	—	—	—
18000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	8	—	—
10000	Lusitania (of Portugal) [S.E.]	2 0 0	—	—	—
103815	Marquitta and New Granada [S.E.]	1 0 0	—	—	—
100000	Port Phillip (gold), Cuneo [S.E.]	1 0 0	—	—	—
11000	St. John del Rey [L.]	15 0 0	87	58 87	—
48174	Un. Mexicana (sil.), Mexico [S.E.]	28 0 0	7	6 1/2 7	—
90000	W. Canada Mining Company [L.]	1 0 0	—	—	—

## FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Quannang (tin) (cop.) [L.]	4 10 0	—	—	—
10000	Gt. Barrier Lead, Min. Ac. N. Ze. [L.]	4 10 0	—	—	—
10000	Pontigbaud (sil.-lead), France [S.E.]	20 0 0	—	—	—

## NON-DIVIDEND FOREIGN MINES.

35000	Alamillos [L.]	0 10 0	—	—	—
20000	Australian (copper), South Australia [S.E.]	7 7 6	—	—	—
20000	Beazir Tin Streaming Company [L.]	0 15 0	—	—	—
7000	Bon Accord, South Australia (copper) [L.] [S.E.]	1 0 0	—	—	—
15000	Cape Copper Mining Company [L.]	4 0 0	—	—	—
25000	Capula (silver), Mexico [L.] [S.E.]	0 15 0	—	—	—
17000	Central Italian (copper) [L.] [S.E.]	1 2 6	—	—	—
6000	Clarendon Consols (copper), Jamaica [L.]	10 0 0	—	—	—
10000	Copac Smelting [L.]	10 0 0	—	—	—
100000	Don Pedro North Del Rey (gold), Brazil [L.] [S.E.]	0 10 0	—	—	—
7000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	—	—	—
25000	East del Rey, Brazil [L.] [S.E.]	1 0 0	—	—	—
80000	East Kongberg Native Silver Mining Co. of Norway [L.]	1 7 6	—	—	—
30000	Elbe Colliery Company [L.]	1 0 0	—	—	—
80000	Ellerelle and Bardowie, Jamaica	0 18 0	—	—	—
8000	English and Canadian Mining Company [L.]	5 0 0	—	—	—
40000	Fortuna (copper), South Australia [L.]	2 0 0	—	—	—
80000	Great Northern (copper), South Australia [L.] [S.E.]	1 10 0	—	—	—
24000	Hindostan (copper), Bengal [L.] [S.E.]	3 0 0	—	—	—
4000	Hope Silver Lead and Copper Mining Co. [L.]	25 0 0	—	—	—
10000	Karibita Colliery Company [L.]	1 0 0	—	—	—
30000	Lagunaso (sulphur, copper), Portugal [L.]	1 0 0	—	—	—
180000	Montes Aures (gold), Brazil [L.] [S.E.]	2 0 0	—	—	—
2000	New Burra Burra (Australia)	5 0 0	—	—	—
60000	New Granada (gold), South America [S.E.]	1 0 0	—	—	—
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	0 17 6	—	—	—
80000	North Rhine Copper (lead) [L.] [S.E.]	1 0 0	—	—	—
15000	Pachuca Silver Mining Company, Mexico [L.]	1 0 0	—	—	—
17000	Quebrada (copper), Venezuela [L.] [S.E.]	3 10 0	—	—	—
10000	San Roque, Spain	5 0 0	—	—	—
60000	Santa Barbara (gold), Brazil [L.] [S.E.]	0 10 0	—	—	—
130000	South Australian Mining Company [L.]	0 16 0	—	—	—
15000	South Europe Mining Company, Spain [L.]	3 0 0	—	—	—
50000	St. John's United (copper, lead), Newfoundland [L.]	1 0 0	—	—	—
13000	Teplitz Colliery Co. [L.]	2 0 0	—	—	—
50000	Vallanueva (gold) [L.]	0 5 0	—	—	—
10000	Vancouver (coal) [L.]	5 0 0	—	—	—
45000	Victor Emanuel, Italy [L.]	1 0 0	—	—	—
1000	Western Africa Malachite (copper) [L.]	110 0 0	—	—	—
12000	Wheal Ellen, South Australia [L.] [S.E.]	5 0 0	—	—	—
80000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	—	—	—
45000	Yadassutana (copper), South Australia [L.] [S.E.]	3 0 0	—	—	—

## PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
700	Aberdovey (sil.-lead), Merio.	1 10 0	—	—	—
4000	Aberdovey (lead), Cardigan	0 10 0	—	—	—
12000	Anna Maria (id., cop., gold) [L.]	1 0 0	—	1	..Fully paid.
35000	Atlas Min. and Smelt. [L.]	0 15 0	—	—	..Mar. 1882
4745	Alfred Con. (cop.), Phillack	4 18 5	—	—	..April, 1863
8000	Bagtor [L.]	1 14 0	—	—	..April, 1863
400	Baldwin, Id. of Man [L.]	2 15 0	—	—	..Mar. 1863
1824	Ballicawadden (tin), St. Austell	18 5 7	—	—	..Mar. 1863
10000	Bampfylde (copper), Devon	1 0 0	—	—	..Mar. 1863
4000	Bardonia Consols (copper)	2 6 0	—	—	..Feb. 1863
3000	Bardonia (copper), Ireland	1 0 0	—	—	—
400	Billins [L.]	200 420 pd.	20	—	..July, 1863
2280	Bosundie (tin, cop.), St. Austell	7 10 0	—	—	..Sept. 1862
160	Bosorne & Bollowall, St. Austell	6 5 0	—	—	..Dec. 1860
5000	Bottle Hill (tin) Plympton	1 7 0	144. 144. 144.	—	..April, 1863
12000	Brea Con. (tin), St. Ives [L.]	1 10 0	—	—	..Mar. 1863
8000	British (tin and cop.) [L.]	0 12 0	—	—	..No call.
4000	Brookwood (cop.) Ashburton	1 12 6	—	—	—
112	Bron-Haag (id.), Denbigh	30 0 0	—	—	..No call.
6120	Brynmor (id.), Cardigan [L.]	2 3 0	—	—	..Nov. 1862
2000	Bryn Hall (lead), Flint	25 0 0	—	—	..April, 1862
400	Bryn Gwlog (lead), Flint	8 0 0	34	31 32	..July, 1863
1861	Brynnall, Llanidloes, Montgo.	7 17 6	—	—	..July, 1863
8880	Buller and Bassett Unit. (cop.)	4 1 6	—	—	..Feb. 1863
1200	Burra Burra (cop.), Kewynn	2 10 0	—	—	..April, 1862
2200	Burren (lead, calamine) [L.]	5 0 0	—	5%	..June, 1862
12000	Calstock Consols (cop.), Calst.	1 17 6	—	—	—
915	Calvadnock, Wendron (tin)	23 16 6	6	6	..Aug. 1861
1000	Camborne Consols (copper)	18 0 0	—	—	..June, 1863
14000	Camborne Vein & Wh. Francis	18 16 4	1%	1%	..Sept. 1862
7000	Cambrian Consolid. (id.) [L.]	1 0 0	—	—	..Aug. 1862
4144	Caradon Hill (cop.), St. Austell	26 18 0	—	—	..June, 1863
10000	Caradon United (copper)	0 10 0	—	—	..July, 1862
6000	Caradon Vale (copper)	5 0 0	—	—	..Sept. 1862
10000	Cardigan Consols (lead and cop.)	—	—	—	..July, 1862
2580	Cardimethen United (lead)	5 0 0	—	—	..Fully paid.
9000	Carn Camborne (copper)	0 16 0	—	—	..July, 1863
4370	Carneswa (id., cop.), Mawgan	1 5 0	—	—	..Nov. 1862
3000	Carn Vivian (tin, cop., lead)	2 6 0	—	—	..Sept. 1862
3400	Carvorth (tin), St. Austell	2 0 0	—	—	..Nov. 1861
20000	Castfort (3500 25				